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Water Resources Data
Kentucky
Water Year 1989

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT KY-89-1
Prepared in cooperation with the Commonwealth of Kentucky
and other agencies

COMPLETED

CALENDAR FOR WATER YEAR 1989

1988

OCTOBER

S	M	T	W	T	F	S
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1989

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AUGUST

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27	28	29	30	31		

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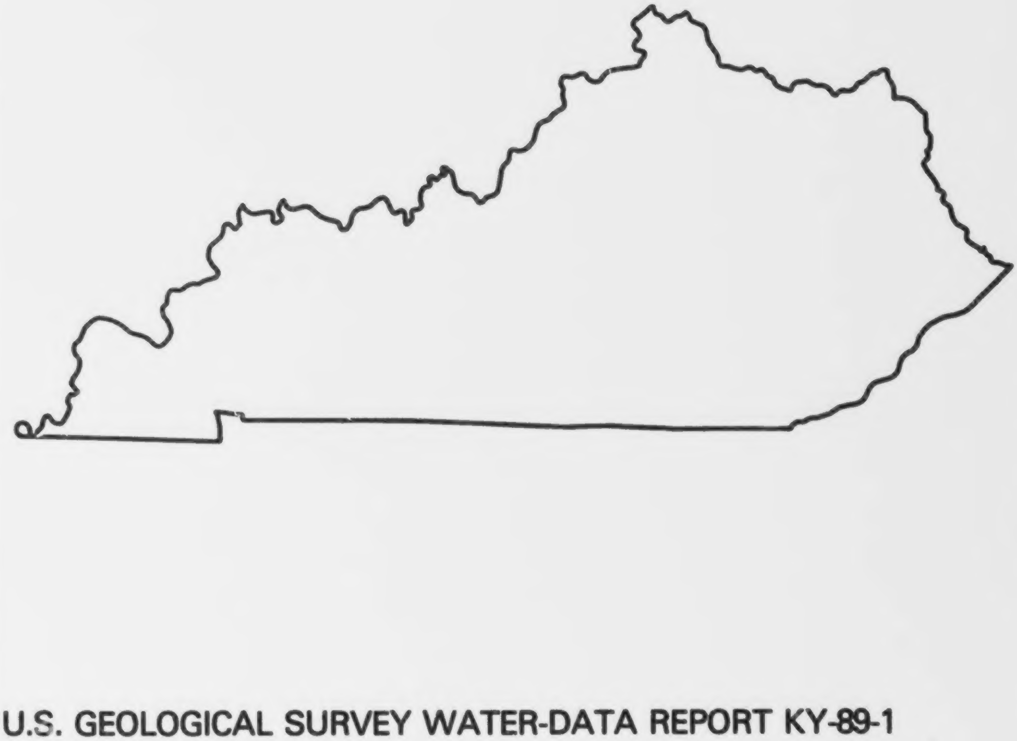
March 3 1849

Water Resources Data Kentucky

Water Year 1989

by R. Garcia, C.J. Sholar and S.G. Toms



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT KY-89-1
Prepared in cooperation with the Commonwealth of Kentucky
and with other agencies

DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
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2301 Bradley Avenue
Louisville, Kentucky 40217

1990

PREFACE

This volume of the annual hydrologic data report of Kentucky is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by state, local, and federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Survey policy and established guidelines. Most of the data were collected, computed, and processed from the District and field offices. Personnel in charge of the District and field offices are:

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This report was prepared in cooperation with the State of Kentucky and with other agencies under the general supervision of Harry C. Rollins, Chief, Hydrologic Surveillance Section, and Alfred L. Knight, District Chief, Kentucky.

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16. Abstract (Limit: 200 words)

Water-resources data for the 1989 water year for Kentucky consists of records of stage, discharge, and water quality of streams; stage and water level of wells. This report contains discharge records from 113 gaging stations; suspended-sediment data for 23 stations (10 daily); daily temperature records for 15 stations; daily specific conductance for 13 stations; ground-water levels for 26 continuous-record wells and 116 partial-record wells; water-quality data from 51 surface-water stations sampled at regular intervals; and miscellaneous temperature and specific conductance data from 70 gaging stations. Also included are 28 partial-record crest-stage and 1 precipitation site. Data collected at various miscellaneous sites are also published. These data represent that part of the National Water Data System operated by the U. S. Geological Survey and cooperating State and Federal agencies in Kentucky.

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[Letters after station name designate type of data: (d) discharge, (c) chemical, (b) biological (t) water temperature, (s) sediment]

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GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

[Letters after station name designate type of data: (d) discharge, (c) chemical, (b) biological (t) water temperature, (s) sediment]

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Well 381653085413302 Local number WC-9A 427
Well 381701085414002 Local number WC-8A 427
Well 381722085405801 Local number 40-17-3, (WC-11) 428
Well 381742085402001 Local number 40-17-5, (WC-13) 428
Well 381827085392401 Local number 39-18-1, (WC-26) 428
Well 381904085384801 Local number 38-19-2, (WC-27) 429
Well 380458085523201 Local number 86-4 429
Well 380619085512301 Local number 86-3 429
Well 380827085503001 Local number 86-5 430
Well 381011085491601 Local number 86-1 430
Well 381102085485601 Local number 86-2 430
Well 381247085463301 Local number CP-18 431
Well 381246085463201 Local number CP-18A 431
Well 381517085455501 Local number 86-6 432
Well 381527085453001 Local number 86-7 433
Well 381524085452301 Local number 86-8 434
Well 381528085454201 Local number 86-9 435
Well 381518085454401 Local number 86-10 436
Well 381518085453402 Local number 86-11 437
Well 381518085451801 Local number 87-1 438

LARUE COUNTY

Well 374151085413201 439

LAUREL COUNTY

Well 370757084045001 439

LETCHER COUNTY

Well 371033082374301 439

LINCOLN COUNTY

Well 372739084402101 440

LOGAN COUNTY

Well 365046086444901 440

MCCRACKEN COUNTY

Well 370551088510401 440

METCALFE COUNTY

Well 370211085364301 441

WARREN COUNTY

Well 370342086080101 441

PRECIPITATION STATION, BY COUNTY, FOR WHICH RECORD IS PUBLISHED

ROWAN COUNTY

380706083324900 442

INTRODUCTION

Water resources data for the 1989 water year for Kentucky consist of records of stage, discharge, and water quality of streams and lakes; and water-levels of wells. This report includes daily discharge records for 113 stream-gaging stations and data for 28 crest-stage sites. It also includes water-quality data for 51 stations sampled at regular intervals. Also published are 15 daily temperature and 13 specific conductance records, and 70 miscellaneous temperature and specific conductance determinations for the gaging stations. Suspended-sediment data for 23 stations (of which 10 are daily) are also published. Ground-water levels are published for 26 recording and 116 partial sites. Precipitation data at a regular interval is published for 1 site. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurement and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Kentucky.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1944 to 1973 in a series of water-supply papers entitled, "Ground-Water Levels in the United States."

Beginning with the 1961 water year and continuing through water year 1989, streamflow data have been released by the U.S. Geological Survey in annual reports on a State-boundary basis. Water-quality records beginning with the 1964 water year, and ground-water data since the 1971 water year have been similarly released either in separate reports or in conjunction with streamflow records. These reports provided rapid release of preliminary water data shortly after the end of the water year. The final data were then released in the water-supply paper series mentioned above. Beginning with the 1975 water year, water data will be released on a State-boundary basis in final form and will not be republished in the water-supply paper series. The 1975 and subsequent water year reports will be in a series which will carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report KY 89-1." These reports are for sale to the public for a nominal fee by the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (502) 582-5241.

COOPERATION

The U.S. Geological Survey and organizations of the Commonwealth of Kentucky have had cooperative agreements for the systematic collection of streamflow records since 1938, for ground-water records since 1943, and for water-quality records since 1949. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

University of Kentucky, D.P. Roselle, President, through Kentucky Geological Survey,
D.C. Haney, Director and State Geologist.
Kentucky Natural Resources and Environmental Protection Cabinet, C.H. Bradley, Secretary.
City of Elizabethtown, M.B. Carroll, Mayor.
City of Louisville, J.E. Abramson, Mayor.
Jefferson County, Harvey Sloane, County Judge/Executive.
Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 92 gaging stations.
The Kentucky Utilities Company and the Public Service Company of Indiana aided in collecting records.
Louisville and Jefferson County Metropolitan Sewer District, G.R. Garner, Executive Director.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

Monthly mean and yearly mean streamflow for the 1989 water year and the period of record are shown in figure 1 for three representative gaging stations on streams in Kentucky. Mean annual streamflow in 1989 was above the long-term average throughout Kentucky. At all gaging stations on unregulated streams, 1989 flow exceeded the long-term average.

Annual peak flows during the 1989 water year exceeded historical peaks at several stations in eastern and central Kentucky. Those extremes were the result of a winter storm front that moved into the state in mid-February and stalled for approximately 3 days. Station 03301500, Rolling Fork near Boston, which has had continuous record since 1938, was one of the sites where the peak of record was exceeded. The other sites where historical peaks were exceeded generally had 25 or less years of continuous record. The annual maximum discharge recurrence intervals varied throughout the state with some sites having a recurrence interval of less than 2 years while others exceeded 100 years. Base flow recovered from the 1989 water year with most minimum daily flows having a recurrence interval of less than two years. The instantaneous maximum and daily minimum flows at selected long-term non-regulated stations and the recurrence interval for each are given in table 1.

Table 1.--Mean, maximum, and minimum streamflow for water year 1989 and recurrence intervals at selected stations

		Mean		Maximum		Minimum	
Station number	Length of record (years)	Daily streamflow (ft^3/s)	Percent of average	Peak streamflow (ft^3/s)	Recurrence interval (years)	Daily streamflow (ft^3/s)	Recurrence interval (years)
BIG SANDY RIVER BASIN							
03210000	48	97.8	142	1,860	<2	0.42	<2
LITTLE SANDY RIVER BASIN							
03216540	17	23.9	159	1,600	>50	.01	<10
TYGARTS CREEK BASIN							
03216800	32	139	164	7,780	>5	.06	<10
CABIN CREEK BASIN							
03237900	17	50.3	167	4,520	>2	0	<2
LICKING RIVER BASIN							
03248500	51	255	148	4,450	>2	5.5	<2
03250100	22	255	196	10,600	=100	.80	<2
03251000	43	213	145	7,580	<5	0	<2
03252000	36	541	189	15,000	<25	.96	<10
03252500	51	1,186	158	28,300	<25	9.7	<2
KENTUCKY RIVER BASIN							
03280600	32	423	145	34,400	<25	2.1	<2
03280700	32	140	150	14,000	<50	.80	<2
03281040	17	384	144	25,500	<10	3.1	<2
03281100	25	374	144	--	--	2.6	<2
03281500	56	1,412	136	26,200	<5	13	<2
03282500	35	140	160	2,660	<5	.71	<2
03283500	52	884	183	17,300	<10	15	<2
03285000	47	905	195	19,200	=5	6.6	<2
03289000	39	61.6	189	2,280	<50	2.4	<2
HARRODS CREEK BASIN							
03292460	21	44.7	121	5,880	<50	0	<10
BEARGRASS CREEK BASIN							
03293000	45	29.8	117	1,730	<5	.26	<10
SALT RIVER BASIN							
03297845	10	79.8	153	5,370	--	0	--
03298000	45	255	147	16,100	<10	0	<2
03299000	51	722	210	26,500	<10	.31	<10
03300400	17	1,146	182	31,000	<25	2.7	<10
03301500	51	3,170	177	66,500	>100	26	<2
03302000	45	122	137	5,130	<25	4.5	<2
GREEN RIVER BASIN							
03307000	50	433	149	14,600	<5	19	<2
03310300	30	895	182	19,200	<25	72	<2
03310400	30	123	207	5,120	<25	12	<2
03311600	17	32.5	173	2,670	<5	.81	<2
03318800	33	309	163	9,000	<10	.19	<2
03320500	49	538	194	32,000	>100	2.2	<2
CUMBERLAND RIVER BASIN							
03400500	49	191	135	2,700	<2	7.8	<10
03403910	21	807	145	17,100	<5	33	<2
03404900	16	116	138	2,240	<2	1.3	<2
03406500	53	1,400	152	25,400	<5	17	<2
03407500	37	444	163	14,600	<10	3.3	<2
03410500	47	2,661	151	46,200	<5	74	<2
03435140	16	41.2	136	3,800	<5	.31	<2
03438000	49	640	182	9,300	<5	17	<10
MASSAC CREEK BASIN							
03611260	18	27.6	143	4,200	<10	.40	<2
BAYOU DE CHIEN BASIN							
070240004	44	183	173	4,170	<5	14	<2

Quality of Water

High streamflow conditions, resulting from heavy rains, were experienced throughout much of Kentucky during the week of February 13th (see surface-water hydrologic conditions). During that week, water-quality samples representing high-flow conditions were collected at many locations throughout the State.

A comparison of selected constituents from the high-flow event samples to the previous 10 years of record is presented in table 2. The location of the sites selected for comparison is shown in fig. 6. The comparisons indicate that the event samples had high concentrations for some constituents, generally greater than the 75th percentile of the historical data. Agricultural activities upstream from the sampling sites affect surface water quality by contributing nutrients and sediment through overland runoff.

Surface water quality varies across the state from basin to basin and is also affected by seasonal changes. The suspended sediment median for the year at NASQAN stations ranged from 22 to 170 milligrams per liter (mg/L). Three sites (03254000, 03290500 and 03298500) had suspended sediment medians greater than third quartile for the previous ten years of record as summarized in table 3. The medians for dissolved solids ranged from 72 to 235 mg/L for the year at the NASQAN sites. In general these figures were closer to the medians for the previous ten years of record for dissolved solids. One site (03308500) had a median for dissolved solids of 110 mg/L which was less than 151 mg/L (25th percentile) for the prior ten years.

Ground-Water Levels

Most observation wells are concentrated in the alluvial aquifer underlying Louisville and western Jefferson County. A few are in or near the well field of Elizabethtown, Kentucky and are used to monitor water levels in the karst aquifer used for that city. A few observation wells are scattered throughout the State to monitor water-level trends in the various bedrock aquifers.

Ground-water levels in the alluvial aquifer in Jefferson County had been declining for the period 1985-88 because of a deficit in precipitation of about 28 inches for the 4 years. The declines were 1 to 6 feet, and the larger declines were generally in wells more distant from the Ohio River. Above normal precipitation in 1989 reversed the declining trend and most wells showed a rise in water levels of 1 to 2 feet. Hydrographs in figure 2 and 3 show the rise in the downtown area (well 381447085454001) and in the western part of Louisville (well 381034085502601).

Most water-level measurements in observation wells in bedrock aquifers throughout the State resumed in 1989 after a lapse of several years. Thus, the effect of the deficit precipitation in 1985-88 is unknown, but it was probably small because water levels in the wells in 1989 were very near the levels in the historical data.

Table 2.-- Summary of selected constituents at selected sites

[All values are in milligrams per liter except for discharge which is in cubic feet per second.]

Water-quality constituent or discharge	Number of observations from Oct. 1978 to Sept. 1988	Percent of samples in which values were less than or equal to those shown		High flow concentration or measurement
		50	75	
03254000, Licking River at Butler, Kentucky				2/16/89
Nitrogen organic, total as N	43	0.52	0.86	2.1
Phosphorus organic, total as P	65	.11	.18	1.1
Sediment concentrations, suspended	66	42	102	570
Discharge, instantaneous	67	1300	5800	81400
03290500, Kentucky River at Lock 2, at Lockport, Kentucky				2/17/89
Nitrogen organic, total as N	50	.45	0.58	[1].55
Phosphorus organic, total as P	93	.14	.21	.82
Sediment concentrations, suspended	82	26	68	[2]>500
Discharge, instantaneous	93	3580	11650	122000
03298500, Salt River at Shepherdsville, Kentucky				2/16/89
Nitrogen organic, total as N	43	.73	.90	1.4
Phosphorus organic, total as P	71	.25	.44	.78
Sediment concentrations, suspended	71	26	60	179
Discharge, instantaneous	73	321	1200	33600
03301630, Rolling Fork near Lebanon Junction, Kentucky				2/16/89
Nitrogen organic, total as N	43	.59	.86	1.0
Phosphorus organic, total as P	65	.19	.31	.54
Sediment concentrations, suspended	66	82	199	219
Discharge, instantaneous	66	843	2100	81400

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[1] Estimate from scatter plot of total nitrogen ammonia as a function of total nitrogen ammonia and organic.

[2] Estimate from scatter plot of sediment as a function of discharge.

Table 3.--Summary for selected characteristics at selected sites, October 1977 to September 1988

[25P, percent of samples which were less or equal to value shown; 50P, percent of samples which were less or equal to value shown; 75P, percent of samples which were less or equal to value shown; N, number of samples collected during the period. All values are in milligrams per liter.]

	Suspended Sediment					Dissolved Solids				
		Water Years 1978-1988					Water Years 1978-1988			
Station number	1989 Median	25P	50P	75P	N	1989 Median	25P	50P	75P	N
03215000	64	26	52	212	79	232	197	245	336	75
03254000	160	19	42	102	66	128	129	154	176	67
03290500	76	14	26	68	82	173	159	186	221	92
03298500	78	14	26	60	71	235	213	237	261	73
03301630	170	46	82	199	66	200	180	210	224	66
03308500	30	11	27	74	53	110	151	182	220	11
03410500	22	2	6	12	21	72	65	88	122	12
03612500	100	24	74	163	78	156	155	172	190	70

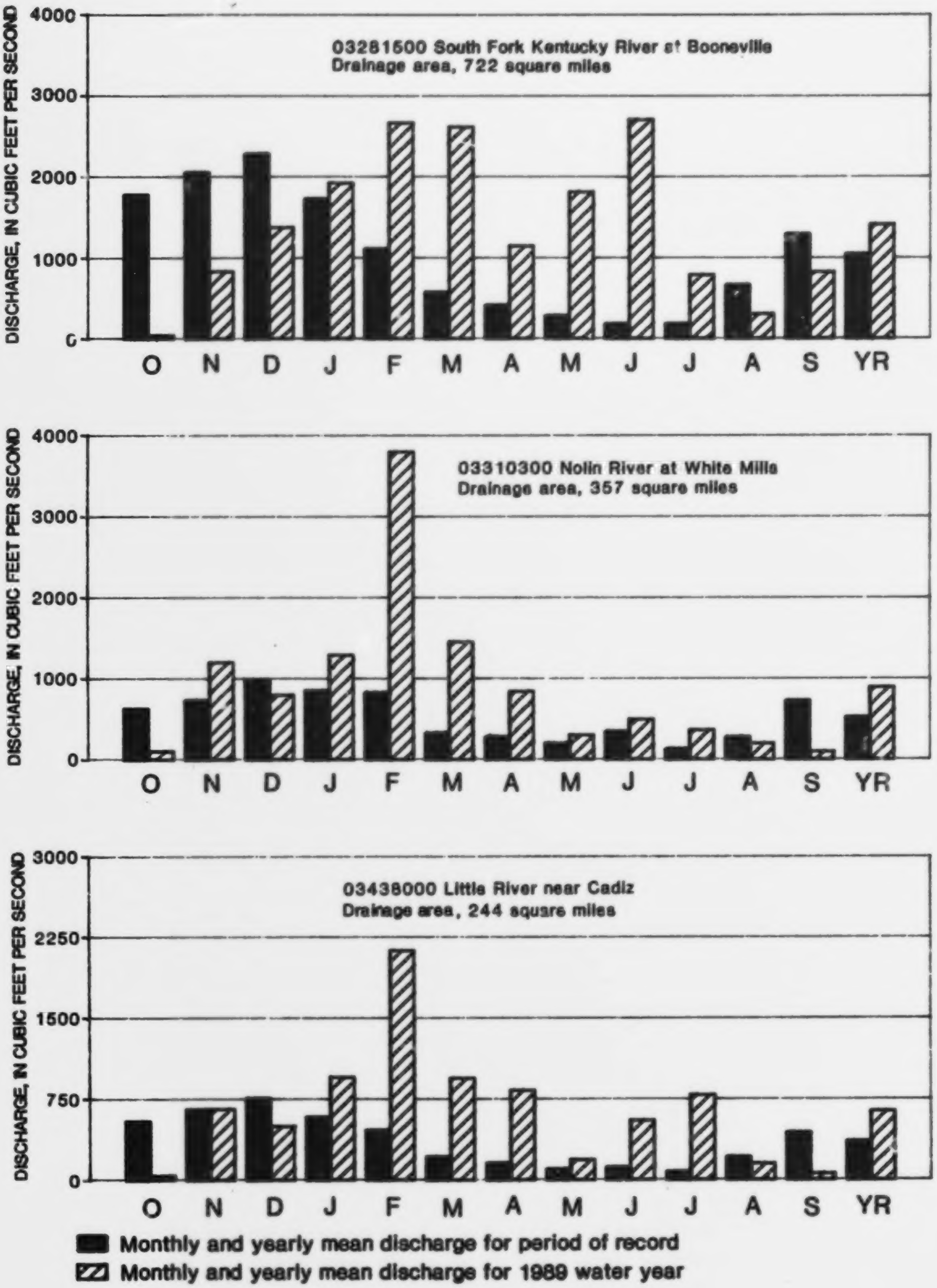

Figure 1.—Mean runoff during 1989 water year and period of record for three representative gaging stations.

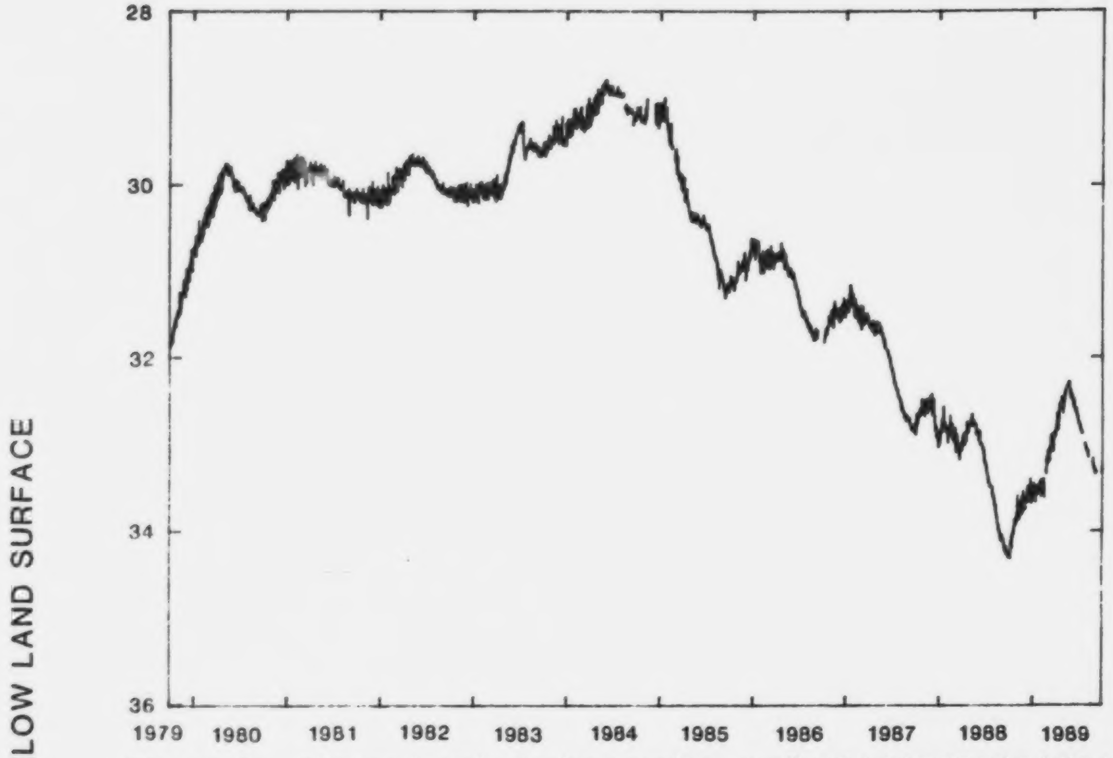

Figure 2.--Water level at observation well 381447085454001.

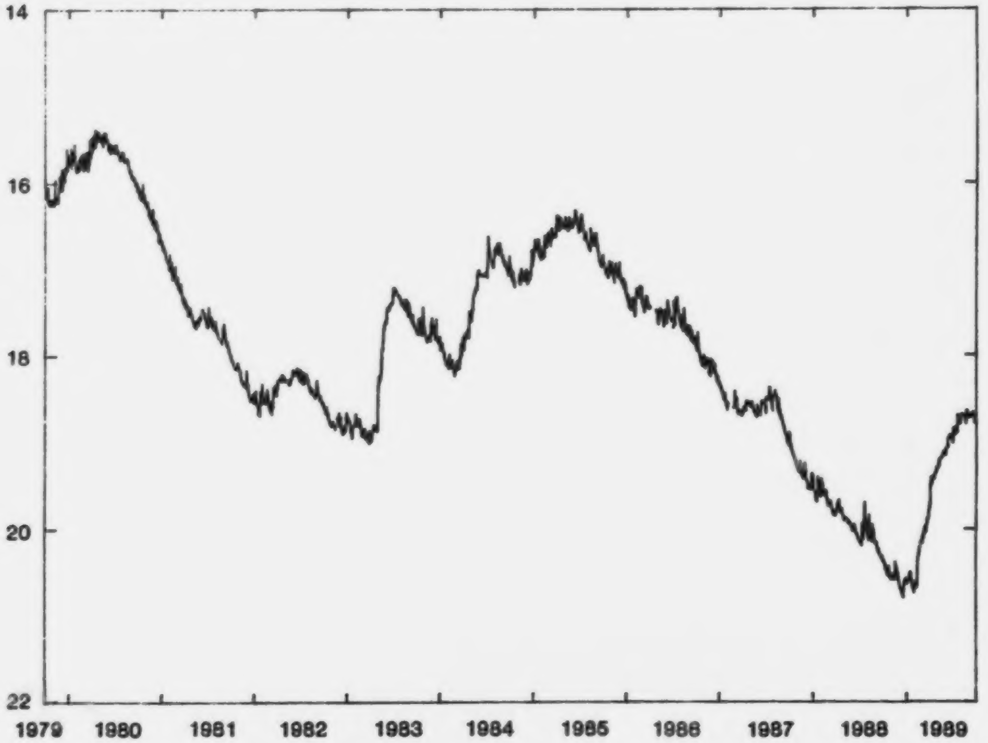

Figure 3.--Water level at observation well 381034085502601.

SPECIAL NETWORKS AND PROGRAMS

Louisville and Jefferson County Metropolitan Sewer District (MSD) Sampling Network is a network of 26 surface water-quality sites in Jefferson County. The program is a cooperative effort between the U.S. Geological Survey and MSD to 1) determine the current status of water quality in the major streams in Jefferson County, 2) identify problem stream segments, and whether they are impacted by point or non-point sources of pollution, and 3) obtain streamflow information on these streams. The 26 sites are sampled biweekly. At five of the sites continuous-record streamflow is determined, and at four of these sites continuous-record water temperature, specific conductance, pH, and dissolved oxygen data are collected.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Water-Quality Assessment (NAWQA) Network is a network of fixed-location and synoptic sampling stations. It is currently limited in Kentucky to the Kentucky River basin. The U.S. Geological Survey began the National Water-Quality Assessment Program in April 1986 to (1) provide a nationally consistent description of current water-quality status, (2) define recent trends in water quality, and (3) relate past and present water-quality conditions to relevant natural features, the history of land and water use, and land- and waste-management practices. The pilot study of the Kentucky River basin is one of four surface-water pilot studies and will be used to test, and modify as necessary, assessment concepts and approaches in preparation for future full-scale implementation of the National program.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1989 water year that began October 1, 1988, and ended September 30, 1989. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, and water-quality data for surface water data. The locations of the stations and wells where the data were collected are shown in figures 5-11. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells, and in Kentucky for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 03208000, which appears just to the left of the station name, includes the two-digit Part number "03" plus the six-digit downstream-order number "208000." The Part number designates the major river basin; for example, Part "03" is the Ohio River basin.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 4).

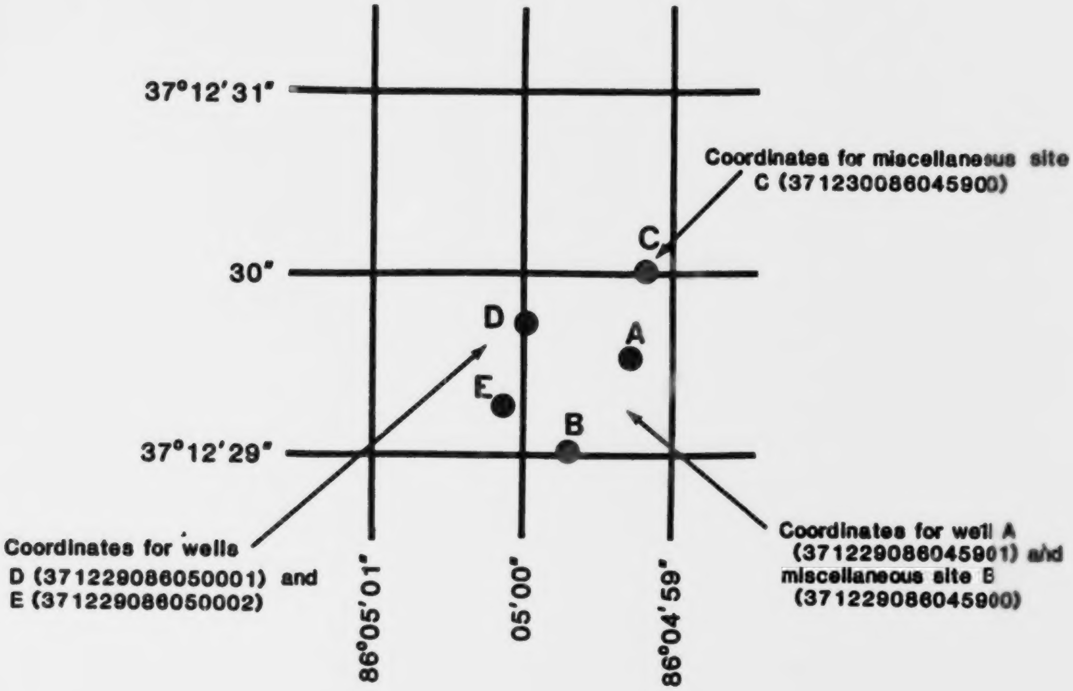
37°12'31"
Coordinates for miscellaneous site C (371230086045900)
C
30"
D
A
E
B
37°12'29"
Coordinates for wells D (371229086050001) and E (371229086050002)
86°05'01"
05'00"
86°04'59"
Coordinates for well A (371229086045901) and miscellaneous site B (371229086045900)

Figure 4.—System for numbering wells, springs, and miscellaneous sites (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record.

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records."

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location; period of record; average discharge; historical extremes; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table (see next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Kentucky District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the office whose address is given on the back of the title page of this report.

Records of discharge collected by agencies other than the U.S. Geological Survey

The following agency has collected records of discharge in Kentucky during the 1989 water year that are not contained in publications of the U.S. Geological Survey:

U.S. Army Corps of Engineers, Memphis District: Records for Mississippi River at Hickman are contained in the Memphis Districts annual publication entitled, "Stages and Discharges of the Mississippi River and its Tributaries in the Memphis District, 1989."

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records," as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 6 and 7.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Kentucky District.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the Kentucky District whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the Kentucky District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

Laboratory Measurements

Sediment samples, samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Value determined by laboratory

Records of Ground-Water Levels

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Kentucky are shown in figures 9-11.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Precipitation Quality

The precipitation-quality data presented in this report represent analyses of time-composite samples, most often for a collection period of one week. This is in contrast to most of the published surface-water quality data which represent samples taken of specific times.

On-Site Measurements and Sample Collection

Precipitation samples are collected with wet/dry collectors. The wet/dry collector is the preferred precipitation sampler and consists of a bucket which is open only during periods of wet (rainfall, snow, etc.) precipitation. During dry periods the sample bucket is covered, thus excluding dry-fall precipitation from the sample.

National Trends Network (NTN) stations are equipped with weighing-bucket rain gages, which graphically record rainfall as well as count rainfall events. The other commonly-used recording gage consists of a rainfall catchment pipe and a float-driven digital recorder which periodically records the water-level in the pipe.

Time-composite wet-precipitation samples are collected and brought back to the laboratory and weighed. Rainfall quantity is estimated from the sample weight. A temperature-density correction can be applied if desired but normally this correction results in a very small change in the estimated quantity of rainfall. An estimation of the sampler efficiency is made by computing the ratio of rainfall amount collected in the sample bucket to that measured by the recording rain gage. This collector efficiency ratio is an important indicator of possible collector malfunction. For example, a ratio substantially less than one indicates that the wet/dry collector was not opening properly and thus, excluding rainfall.

After weighing the sample, a small portion is removed for measurement of pH, specific conductance, and, in some instances, titratable acidity. The pH and special conductance are both determined electrometrically according to methods described in the National Atmospheric Deposition Program "NADP Instruction Manual: Site Operation". The remainder of the sample is then used for laboratory chemical analyses. This portion of the sample is shipped to the laboratory raw and untreated. In the case of NTN operation, the original bucket is resealed and mailed to the Illinois State Water Survey Central Analytical Laboratory (CAL) for analysis. In all other instances, sample portions are preserved, treated, and analyzed according to specific project requirements.

Data presentation

Records of precipitation quality are published following the "records of ground-water" section of this report. As with records of daily water discharge and surface-water quality, precipitation-quality records consist of two parts, a station header and a data table. The station header contains the descriptive information pertinent to the estabiishment, location, and operation of the site. Records are presented alphabetically by county and, within each county, by latitude, longitude, and sequence number. As with ground-water wells, the primary site identifier used for precipitation-quality stations in this report is the 15-digit composite of these three numbers. The following text presents a clarification of the subheadings which follow the station identification number and station name.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published precipitation-quality records for the station. Periods of record are presented separately for each type of sample collected at the site (in this report, wet precipitation, dry precipitation, and fog).

INSTRUMENTATION--In this section, an abbreviated-style listing of the data-recording and sample-collection equipment permanently housed at the site is presented.

REMARKS.--This section is reserved for comments pertaining to unusual or extraordinary circumstances or to qualifying information which must be used accurately interpret the data presented for the site. More general comments which may pertain to several or all of the sites are presented in the "EXPLANATION OF RECORDS" section in the introductory part of the report.

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the offices whose addresses are given on the back of the title page.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary base and is expressed as milligrams dry weight of algae produced per liter of sample.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloro-platinate ion. Color is expressed in units of the plantinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile $[(ft^3/s)/mi^2]$ is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Water-Quality Assessment (NAWQA) Network is a network of fixed-location and synoptic sampling stations. It is currently limited in Kentucky to the Kentucky River basin. The U.S. Geological Survey began the National Water-Quality Assessment Program in April 1986 to (1) provide a nationally consistent description of current water-quality status, (2) define recent trends in water quality, and (3) relate past and present water-quality conditions to relevant natural features, the history of land and water use, and land- and waste-management practices. The pilot study of the Kentucky River basin is one of four surface-water pilot studies and will be used to test, and modify as necessary, assessment concepts and approaches in preparation for future full-scale implementation of the National program.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay..........	0.00024 - 0.004	Sedimentation
Silt...........	.004 - .062	Sedimentation
Sand..........	.062 - 2.0	Sedimentation or sieve
Gravel.........	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2.time)] for periphyton and macrophytes and [mg C/(M^3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mgO /(m^2.time)] for periphyton and macrophytes and [mgO /(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons/day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow ($7\ Q_{10}$) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1986, is called the "1986 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

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2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3. Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

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5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

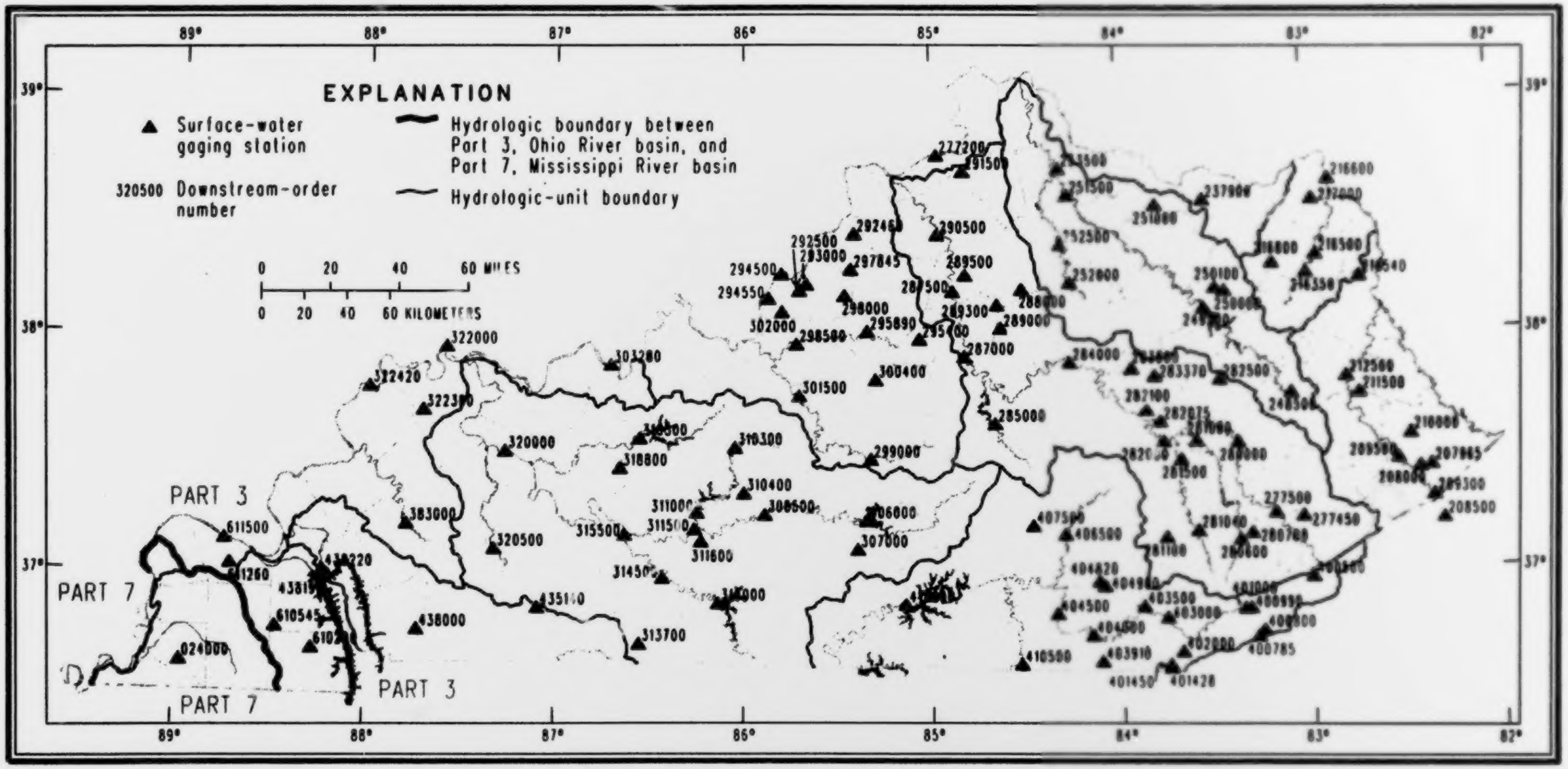

EXPLANATION
▲ Surface-water gaging station
320500 Downstream-order number
Hydrologic boundary between Part 3, Ohio River basin, and Part 7, Mississippi River basin
Hydrologic-unit boundary
0 20 40 60 MILES
0 20 40 60 KILOMETERS
89°
88°
87°
86°
85°
84°
83°
82°
39°
38°
37°
PART 3
PART 7
PART 3
PART 7
322000
322420
322300
320000
320500
383000
611500
611260
438220
438190
610545
024000
438000
435100
303280
318800
315500
314500
313700
310300
310400
311000
311500
311600
308500
306000
307000
294500
294550
302000
292500
293000
292460
297845
298000
295890
298500
301500
300400
299000
277200
291500
290500
289500
287500
289300
288000
289000
287000
285000
251500
251000
252500
252800
237900
250100
250000
284000
283370
282500
282100
282075
282000
281500
281040
280700
280600
281100
277500
277450
407500
406500
404820
404900
403500
403000
404500
404600
403910
402000
401450
401428
401000
400800
400785
410500
216600
217000
216800
216500
216540
216350
212500
211500
210000
209500
209000
209300
208500
207965

Figure 5.--Location of gaging stations in Kentucky.

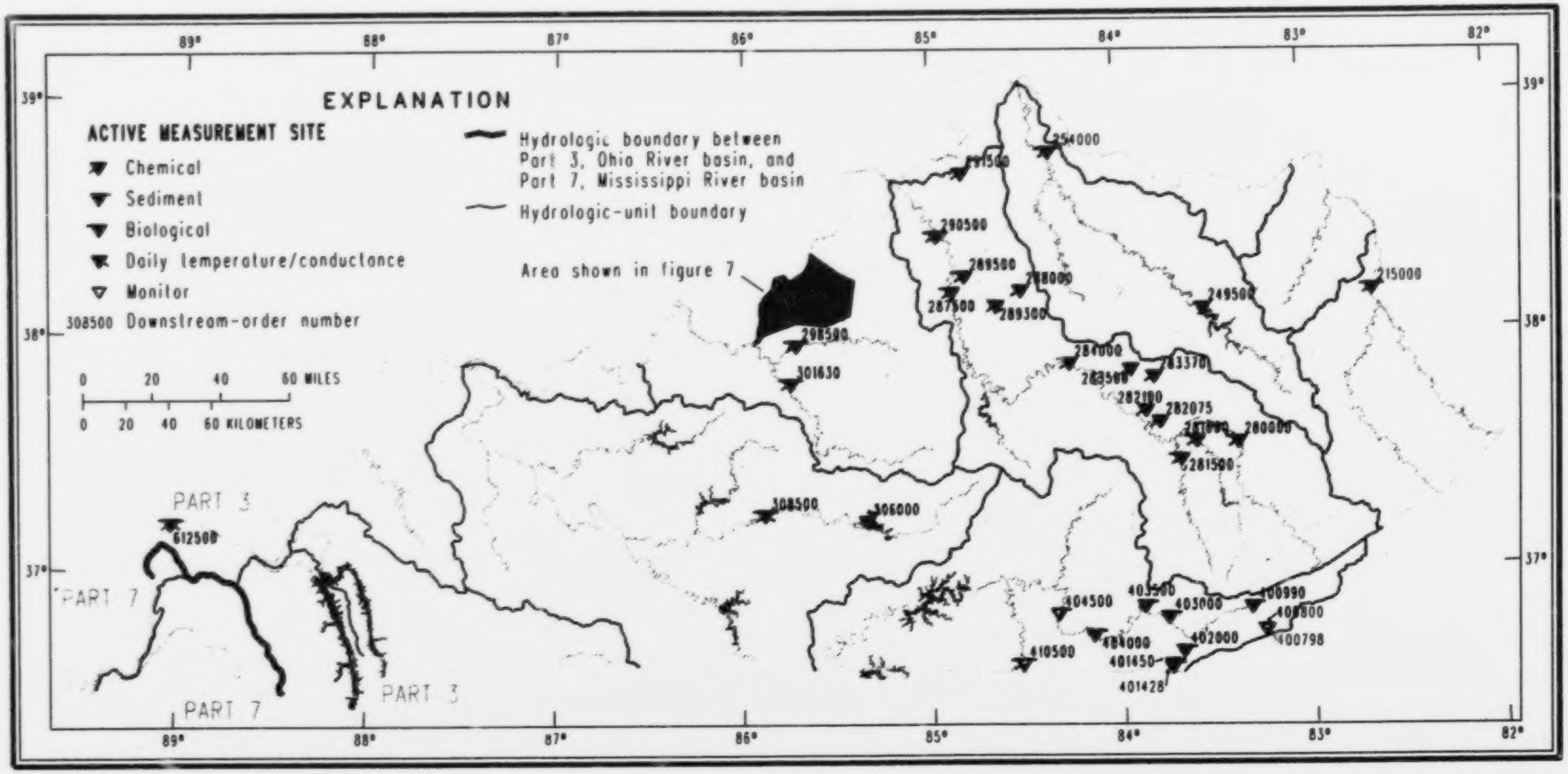
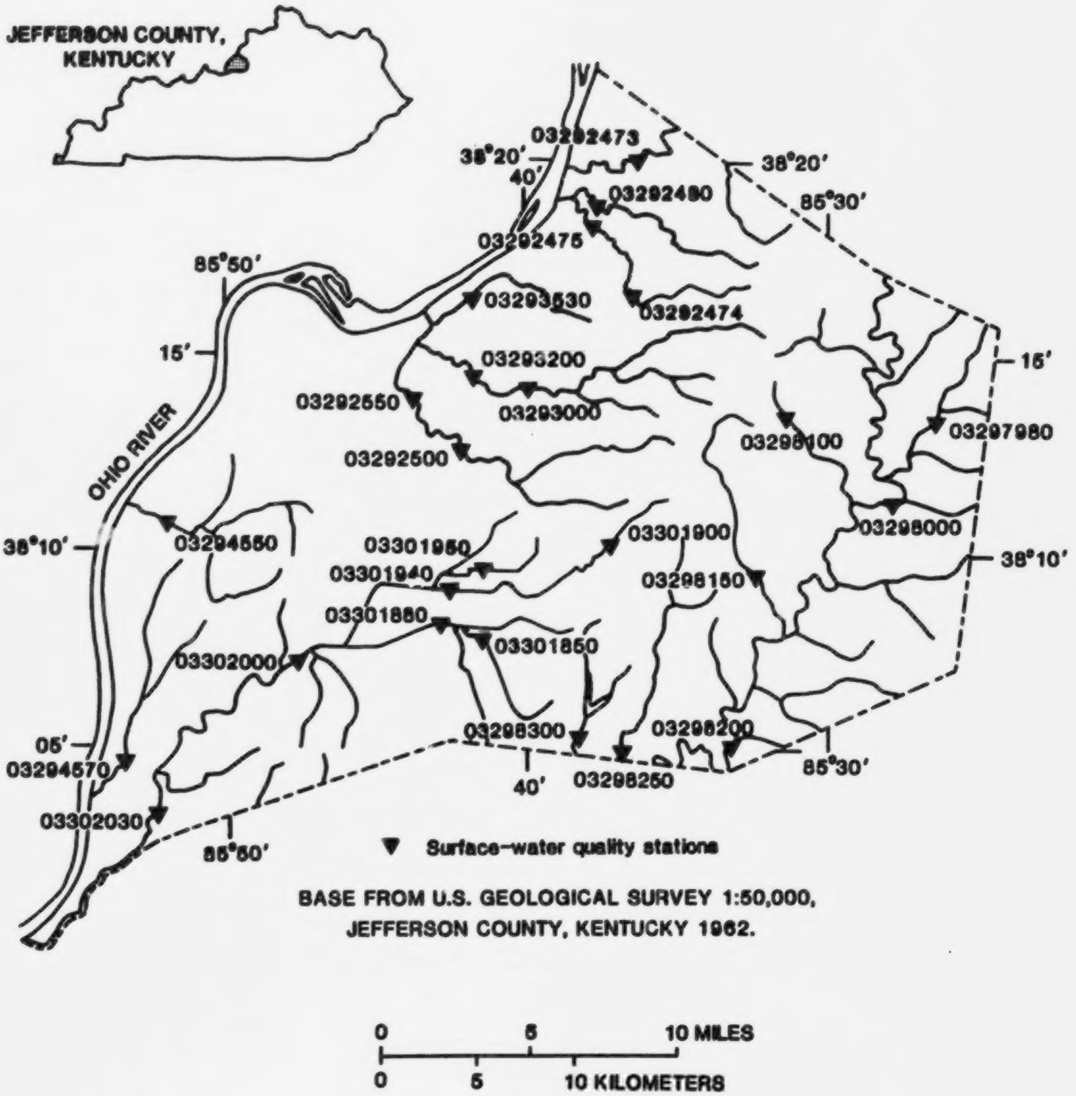

EXPLANATION
ACTIVE MEASUREMENT SITE
▼ Chemical
▼ Sediment
▼ Biological
▼ Daily temperature/conductance
▽ Monitor
308500 Downstream-order number
Hydrologic boundary between Part 3, Ohio River basin, and Part 7, Mississippi River basin
Hydrologic-unit boundary
Area shown in figure 7
0 20 40 60 MILES
0 20 40 60 KILOMETERS
89°
88°
87°
86°
85°
84°
83°
82°
39°
38°
37°
PART 3
PART 7
PART 7
PART 3
612500
308500
306000
298500
301630
291500
290500
289500
288000
287500
289300
254000
249500
215000
284000
283500
283370
282100
282075
281000
280000
281500
404500
403500
403000
400990
400800
400798
404000
402000
401450
401428
410500

Figure 6.--Location of surface water quality stations in Kentucky.


JEFFERSON COUNTY, KENTUCKY
03292473
38°20'
40'
38°20'
03292480
85°30'
03292475
85°50'
03293530
03292474
15'
03293200
15'
03292550
03293000
03298100
03297980
OHIO RIVER
03292500
03298000
38°10'
03294550
03301950
03301900
38°10'
03301940
03298150
03301880
03301850
03302000
05'
03298300
03298200
03294570
40'
03298250
85°30'
03302030
85°50'
▼ Surface-water quality stations
0
5
10 MILES
0
5
10 KILOMETERS

BASE FROM U.S. GEOLOGICAL SURVEY 1:50,000,
JEFFERSON COUNTY, KENTUCKY 1962.

Figure 7.—Location of surface-water quality stations in Jefferson County, for the MSD Sampling Network.

03207965 GRAPEVINE CREEK NEAR PHYLLIS, KY

LOCATION.--Lat 37°25'57", long 82°21'14", Pike County, Hydrologic Unit 05070202, on right bank at the Grapevine Recreation area, 1.3 mi downstream from Dicks Fork, 1.3 mi southwest of Phyllis, and at mile 1.1.

DRAINAGE AREA.--6.20 mi^2.

PERIOD OF RECORD.--October 1973 to September 1982, April to September 1989.

GAGE.--Water-stage recorder. Altitude of gage is 780 ft from topographic map.

REMARKS.--Estimated daily discharges: June 17 to Aug. 1 and Aug. 11 to Sept. 19. Records poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--9 years (Water years 1974-82), 9.19 ft^3/s, 20.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,650 ft^3/s, June 1, 1974, gage height, 3.45 ft, from rating curve extended above 430 ft^3/s; maximum gage height, 9.1 ft, Apr. 7, 1977, from floodmark, backwater from Fishtrap Dam; no flow for part of Aug. 18, 19, 1982.

EXTREMES FOR CURRENT PERIOD.--April to September 1989: Peak discharge greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 3	1300	304	1.95	June 16	0130	323	1.98
May 5	1830	*1,350	*3.09	Aug. 10	1830	323	1.98
May 9	2300	332	1.99				

Minimum daily discharge, 0.09 ft^3/s, June 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.9	.50	.20	14	9.8
2	---	---	---	---	---	---	---	2.7	.60	.11	5.9	6.0
3	---	---	---	---	---	---	---	35	.25	5.0	2.8	3.7
4	---	---	---	---	---	---	---	42	.09	18	1.6	2.5
5	---	---	---	---	---	---	---	438	1.1	8.6	1.7	1.7
6	---	---	---	---	---	---	---	283	1.1	4.0	2.5	1.2
7	---	---	---	---	---	---	---	74	1.8	2.4	1.8	.88
8	---	---	---	---	---	---	---	47	.89	1.7	38	.87
9	---	---	---	---	---	---	---	97	8.9	1.3	66	.41
10	---	---	---	---	---	---	---	139	6.9	1.0	128	.25
11	---	---	---	---	---	---	---	55	2.0	.90	23	1.1
12	---	---	---	---	---	---	---	35	1.5	1.1	5.8	.68
13	---	---	---	---	---	---	---	24	1.1	1.0	1.5	1.7
14	---	---	---	---	---	---	---	17	.70	.94	.25	4.7
15	---	---	---	---	---	---	---	31	39	.84	.28	28
16	---	---	---	---	---	---	---	45	149	.78	.20	13
17	---	---	---	---	---	---	---	29	200	.70	5.0	6.5
18	---	---	---	---	---	---	---	19	56	.64	2.5	3.0
19	---	---	---	---	---	---	---	13	25	.60	1.0	1.4
20	---	---	---	---	---	---	---	11	13	.56	2.0	1.2
21	---	---	---	---	---	---	---	7.3	6.4	.69	6.6	1.2
22	---	---	---	---	---	---	---	5.6	4.6	.53	3.0	8.0
23	---	---	---	---	---	---	---	7.4	3.7	.44	1.7	15
24	---	---	---	---	---	---	---	3.9	3.2	.37	1.0	11
25	---	---	---	---	---	---	3.2	3.3	2.6	.33	1.2	8.0
26	---	---	---	---	---	---	3.0	2.7	2.9	18	.59	10
27	---	---	---	---	---	---	2.6	2.3	1.6	14	.33	8.4
28	---	---	---	---	---	---	2.5	1.7	.98	10	.18	7.4
29	---	---	---	---	---	---	2.2	2.0	.62	7.5	.10	6.1
30	---	---	---	---	---	---	2.1	1.5	.34	9.3	6.5	8.8
31	---	---	---	---	---	---	---	.91	---	12	2.3	---
TOTAL	---	---	---	---	---	---	---	1477.21	536.37	123.53	327.33	172.49
MEAN	---	---	---	---	---	---	---	47.7	17.9	3.98	10.6	5.75
MAX	---	---	---	---	---	---	---	438	200	18	128	28
MIN	---	---	---	---	---	---	---	.91	.09	.11	.10	.25
CFSM	---	---	---	---	---	---	---	7.69	2.88	.64	1.70	.93
IN.	---	---	---	---	---	---	---	8.86	3.22	.74	1.96	1.03

03208000 LEVISA FORK BELOW FISHTRAP DAM, NEAR MILLARD, KY

LOCATION.--Lat 37°25'33", long 82°24'45", Pike County, Hydrologic Unit 05070202, on right bank, 0.4 mi downstream from Fishtrap Dam, 1.1 mi upstream from Lower Pompey Branch, 1.9 mi northeast of Millard, 2.4 mi upstream from confluence with Russell Fork, and at mile 129.6.

DRAINAGE AREA.--392 mi^2.

PERIOD OF RECORD.--February 1938 to current year. Prior to April 1968, published as "Levisa Fork at Fishtrap."

REVISED RECORDS.--WSP 953: Drainage area. WSP 1335: 1938(M), 1939, 1940(M), 1942-43, 1944-45(M), 1946, 1948.

GAGE.--Water-stage recorder. Datum of gage is 600.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 19, 1968, nonrecording gage at site 3.7 mi upstream at different datum. Apr. 19, 1968 to June 18, 1973, water-stage recorder at site 1.0 mi downstream at datum 59.96 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Fishtrap Lake beginning October 1968. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--51 years, 474 ft^3/s, 16.42 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft^3/s, Jan. 29, 1957, gage height, 33.9 ft from floodmark, site and datum then in use, from rating curve extended above 15,000 ft^3/s on basis of slope area measurement of peak flow; maximum gage height, 107.55 ft, Apr. 5, 1977, from floodmark, backwater from Russell Fork; no flow Apr. 5, 1977, all gates on Fishtrap Dam closed; minimum observed discharge prior to Fishtrap lake, 0.1 ft^3/s, Nov. 8, 9, 1939, site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,330 ft^3/s, May 6, gage height, 84.42 ft; minimum daily discharge, 37 ft^3/s, Sept. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	388	152	298	285	276	521	70	1630	262	294	805	191
2	230	151	268	285	217	506	70	3180	218	294	959	187
3	180	151	218	509	202	453	73	2560	228	294	400	201
4	134	151	218	408	203	455	78	1160	262	518	266	233
5	132	152	218	346	628	526	77	2040	323	476	218	147
6	134	153	255	359	1040	929	74	5040	414	267	193	155
7	115	332	258	359	1030	922	74	3960	1230	267	188	226
8	83	504	215	359	896	776	76	4090	809	267	185	251
9	82	520	215	571	751	674	77	3840	754	267	184	251
10	113	399	215	593	498	582	78	3600	811	267	184	252
11	136	199	215	473	363	452	79	2360	552	205	141	328
12	136	199	212	665	363	452	79	1640	482	169	111	348
13	136	199	178	1720	527	447	79	1310	736	169	111	272
14	136	357	153	2150	540	201	118	1040	583	169	90	653
15	136	358	181	2460	781	581	169	1040	1310	123	76	644
16	136	239	199	2330	957	692	169	1200	2270	117	76	1040
17	135	609	199	1310	996	537	265	747	2650	167	76	768
18	136	629	199	875	923	452	401	464	3020	104	79	255
19	138	315	171	697	1160	452	406	670	3200	67	79	254
20	138	310	149	473	1190	840	318	556	2610	78	87	143
21	138	971	300	381	1250	1160	225	552	1620	115	180	37
22	138	1080	580	381	2240	1910	224	408	858	171	240	218
23	138	583	764	381	2760	1520	245	458	705	172	182	1570
24	299	483	519	381	1710	1210	263	381	619	131	211	1310
25	333	443	1250	348	1050	1080	230	279	403	94	186	818
26	324	414	1610	281	708	902	230	279	306	92	150	515
27	326	414	1120	239	857	812	300	978	307	129	149	441
28	238	304	668	239	741	662	865	879	417	222	151	441
29	155	579	377	239	---	588	1590	548	427	414	66	269
30	155	429	240	229	---	269	1830	398	334	333	44	199
31	155	---	285	275	---	70	---	285	---	267	147	---
TOTAL	5353	11779	11947	20601	24857	21633	8832	47572	28720	6719	6214	12617
MEAN	173	393	385	665	888	698	294	1535	957	217	200	421
MAX	388	1080	1610	2460	2760	1910	1830	5040	3200	518	959	1570
MIN	82	151	149	229	202	70	70	279	218	67	44	37

CAL YR 1988 TOTAL 72946 MEAN 199 MAX 1610 MIN 51
WTR YR 1989 TOTAL 206844 MEAN 567 MAX 5040 MIN 37

03208500 RUSSELL FORK AT HAYSI, VA

LOCATION.--Lat 37°12'25", long 82°17'45", Dickenson County, Hydrologic Unit 05070202, on right bank 180 ft downstream from bridge on State Highway 63, at Haysi, and 700 ft downstream from McClure River.

DRAINAGE AREA.--286 mi^2.

PERIOD OF RECORD.--July 1926 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1003: 1926-43. WSP 1385: 1928(M), 1929, 1933(M), 1935(M), 1937-38(M).

GAGE.--Water-stage recorder. Datum of gage is 1,237.61 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 21, 1939, nonrecording gage at highway bridge 180 ft upstream at same datum.

REMARKS.--Records good except for period with ice effect, Dec. 11-20, which is fair. U.S. Army Corps of Engineers satellite precipitation and gage-height telemeter at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

AVERAGE DISCHARGE.--63 years, 328 ft^3/s, 15.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,000 ft^3/s, Apr. 4, 1977, gage height, 28.24 ft, from rating curve extended above 32,000 ft^3/s on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft^3/s, June 27, 28, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges equal to or greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 6	0030	*12,800	*11.73	Sept. 16	0700	5,260	7.25
June 7	0100	4,670	6.86	Sept. 22	1800	5,610	7.48
June 17	0430	9,950	10.12				

Minimum discharge, 13 ft^3/s, Oct. 14, 15; minimum gage height, 1.77 ft, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	23	110	169	110	384	494	1050	96	150	762	173
2	28	22	90	229	107	379	486	2640	87	174	717	215
3	31	21	74	229	205	380	481	1300	93	163	285	146
4	33	21	66	203	746	353	752	794	91	207	177	112
5	27	100	58	160	571	330	1200	2480	115	212	162	90
6	23	209	51	220	491	357	879	6610	517	307	203	80
7	20	123	49	292	608	388	705	2730	2270	507	151	81
8	19	87	47	304	550	378	653	1450	766	436	115	75
9	18	68	48	271	421	349	728	1120	605	269	93	66
10	17	63	46	244	331	318	687	1280	583	195	80	76
11	18	69	e45	220	292	295	587	1060	345	154	72	167
12	17	55	e35	755	250	274	490	850	255	138	65	161
13	15	53	e37	1820	221	303	413	668	599	187	63	140
14	13	50	e40	1060	274	390	353	515	508	136	119	1500
15	14	45	e38	1400	418	404	343	434	873	114	85	561
16	14	48	e36	1050	536	364	311	349	1640	101	74	3270
17	15	258	e35	632	910	316	266	290	6040	94	66	1160
18	15	213	e33	447	816	441	245	243	1620	85	82	554
19	16	153	e32	338	686	796	235	214	824	79	79	336
20	15	206	e35	269	737	686	218	214	688	81	66	236
21	29	243	85	219	1780	1290	204	191	506	77	59	192
22	58	181	337	184	2220	1330	193	165	409	88	66	1690
23	69	132	311	168	1400	898	185	316	378	74	67	2110
24	54	102	636	154	850	846	179	263	301	64	75	1210
25	42	83	1120	146	613	764	170	207	241	61	72	720
26	35	70	472	137	527	627	164	177	200	56	173	867
27	31	76	287	131	464	506	293	199	180	166	219	832
28	29	115	224	118	417	423	515	162	242	321	129	576
29	26	145	181	113	---	366	576	136	205	202	90	411
30	24	129	148	120	---	351	819	120	159	131	399	433
31	24	---	145	121	---	410	---	107	---	323	310	---
TOTAL	818	3163	4951	11923	17551	15696	13824	28334	21436	5352	5175	18240
MEAN	26.4	105	160	385	627	506	461	914	715	173	167	608
MAX	69	258	1120	1820	2220	1330	1200	6610	6040	507	762	3270
MIN	13	21	32	113	107	274	164	107	87	56	59	66
CFSM	.09	.37	.56	1.34	2.19	1.77	1.61	3.20	2.50	.60	.58	2.13
IN.	.11	.41	.64	1.55	2.28	2.04	1.80	3.69	2.79	.70	.67	2.37

CAL YR 1988 TOTAL 49438 MEAN 135 MAX 1220 MIN 11 CFSM .47 IN. 6.43
WTR YR 1989 TOTAL 146463 MEAN 401 MAX 6610 MIN 13 CFSM 1.40 IN. 19.05

e Estimated.

03209300 RUSSELL FORK AT ELKHORN CITY, KY

LOCATION.--Lat 37°18'14", long 82°20'35", Pike County, Hydrologic Unit 05070202, on left bank 10 ft downstream from steel highway bridge on abandoned section of State Highway 80, at Elkhorn City, 0.9 mi upstream from Elkhorn Creek, and at mile 13.2.

DRAINAGE AREA.--554 mi^2.

PERIOD OF RECORD.--Annual maximum, water years 1957-60 and occasional low-flow measurements, 1958-60. October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 773.00 ft. Big Sandy River Survey datum (levels by U.S. Army Corps of Engineers). Mar. 12, 1957 to Jan. 4, 1961, nonrecording gage at site 10 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated since August 1966 by North Fork Pound River Lake (station 03208680) and since March 1965 by John W. Flannagan Lake (station 03208990). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--29 years, 706 ft^3/s, 17.31 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft^3/s, Apr. 4, 1977, gage height, 24.80 ft; minimum, 4.2 ft^3/s, Sept. 20, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--A discharge of 2.4 ft^3/s, was measured on Oct. 18, 1930 (exact location unknown).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft^3/s, May 6, gage height, 13.22 ft; minimum discharge, 62 ft^3/s, Oct. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	79	202	435	311	772	609	2360	321	415	840	252
2	80	78	219	501	288	652	598	5250	308	371	1260	320
3	81	77	313	471	311	620	603	2880	308	364	637	390
4	84	77	304	393	844	600	828	1580	309	576	432	346
5	80	137	298	349	885	585	1350	3120	333	728	328	262
6	74	309	290	388	1000	818	1020	7450	867	849	404	222
7	70	217	279	490	1130	1080	830	4950	3900	1960	382	183
8	68	171	266	512	1140	1040	770	6030	2230	1870	277	162
9	67	146	200	602	844	804	852	4200	1580	1070	246	170
10	66	136	194	781	566	660	806	2950	1890	558	214	187
11	66	142	191	752	502	567	837	2410	1120	389	155	329
12	66	135	179	1260	459	543	836	1790	789	362	145	362
13	65	126	181	3180	467	596	758	1360	1420	508	141	378
14	63	123	203	2050	649	845	642	1080	1100	473	179	1690
15	63	118	261	2530	961	896	585	966	2100	335	160	1110
16	63	115	247	2350	1150	806	548	881	5030	297	138	4860
17	64	296	196	2140	1690	645	524	778	7410	277	151	2160
18	66	351	192	1650	1490	607	517	615	5840	230	826	1200
19	67	259	186	873	1250	986	477	522	2980	172	651	865
20	66	314	198	593	1260	1260	424	582	1480	171	355	585
21	77	346	230	456	3230	2420	392	606	955	170	190	421
22	345	304	575	410	4520	2610	332	541	783	169	124	1780
23	135	236	683	389	3350	1820	322	614	762	171	125	2940
24	125	199	802	359	2140	1390	321	630	699	152	131	1780
25	107	177	1580	282	1060	1010	331	603	628	148	137	1190
26	98	158	783	284	966	844	322	550	473	140	202	1320
27	91	157	855	313	935	690	892	652	344	333	266	1380
28	87	188	1210	197	901	579	1500	600	520	922	256	1050
29	84	227	1150	188	---	562	1370	416	494	605	272	779
30	81	221	813	252	---	539	2060	360	443	360	715	909
31	80	---	422	350	---	504	---	337	---	549	846	---
TOTAL	2713	5619	13702	25780	34299	28350	22256	57663	47416	15694	11185	29602
MEAN	87.5	187	442	832	1225	915	742	1860	1581	506	361	987
MAX	345	351	1580	3180	4520	2610	2060	7450	7410	1960	1260	4860
MIN	63	77	179	188	288	504	321	337	308	140	124	170

CAL YR 1988 TOTAL 102667 MEAN 281 MAX 2110 MIN 63
WTR YR 1989 TOTAL 294279 MEAN 806 MAX 7450 MIN 63

03209500 LEVISA FORK AT PIKEVILLE, KY

LOCATION.--Lat 37°27'51", long 82°31'35", Pike County, Hydrologic Unit 05070203, on right bank 20 ft downstream from bridge on State Highway 1426, 0.75 mi downstream from Lanks Branch, 1.0 mi south of Pikeville, 1.5 mi upstream from Harolds Branch, and at mile 90.5.

DRAINAGE AREA.--1,232 mi^2.

PERIOD OF RECORD.--October 1937 to current year. Gage-height records collected in this vicinity since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WRD KY 78-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 631.98 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 23, 1944, nonrecording gage at site 2.3 mi downstream at datum 2.65 ft higher. Sept. 23, 1944 to Sept. 30, 1952, water-stage recorder 2.3 mi downstream at datum, 1.65 ft higher. Oct. 1, 1952 to Sept. 30, 1979, at site 2.1 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 23 to Feb. 1, Aug. 2-4. Records fair. Flow regulated since October, 1968 by Fishtrap Lake (station 03207995), since August 1966 by North Fork Pound River Lake (station 03208680) and since March 1965 by John W. Flannagan Lake (station 03208990). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--52 years, 1,449 ft^3/s, 15.97 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,500 ft^3/s, Jan. 30, 1957, gage height, 52.72 ft, from rating curve extended above 45,000 ft^3/s, on basis of slope-area measurement of peak flow, site and datum then in use; minimum, 1.5 ft^3/s, Oct. 21, 22, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1862 reached a stage of about 52 ft, at site and datum 2.1 mi downstream, discharge, 82,900 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,300 ft^3/s, May 6, gage height, 28.56 ft, minimum daily, 154 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	485	209	517	767	565	1700	1050	5470	806	875	2360	643
2	289	209	478	801	590	1450	1030	9030	727	887	2600	632
3	270	210	469	973	665	1390	1090	7550	709	832	2340	642
4	213	211	493	897	1450	1280	1520	3920	744	1160	940	717
5	211	280	475	711	1780	1400	2530	5600	808	1580	716	520
6	205	567	479	799	2450	4950	1950	14700	1290	1280	851	432
7	196	573	520	988	2510	3610	1570	10600	4760	2310	843	462
8	156	607	452	1090	2440	2770	1480	10600	4030	2850	603	473
9	154	600	412	1270	1960	2100	1590	9690	2660	1870	530	458
10	157	561	384	1620	1320	1730	1500	8830	3500	1130	488	456
11	186	392	377	1430	1030	1410	1380	6720	2160	753	407	652
12	184	362	363	2370	972	1310	1400	4880	1540	656	324	740
13	182	336	344	6300	1060	1390	1260	3880	2470	695	309	714
14	182	394	327	5750	1490	1500	1150	2910	2260	806	300	2080
15	181	496	385	7210	2500	1940	1120	2870	3870	630	323	2360
16	179	385	430	6430	3140	1990	1070	3020	9110	472	280	5590
17	179	641	393	4580	3900	1570	1070	2380	11700	517	263	4360
18	181	964	369	3490	3420	1330	1210	1680	9500	467	1290	1850
19	180	625	348	2050	3200	1690	1160	1660	7770	327	1180	1340
20	171	748	316	1420	3220	2210	1040	1630	5320	314	736	1000
21	188	1120	494	1040	5470	3970	880	1630	3480	353	471	604
22	280	1300	1190	932	8270	5680	807	1410	1990	406	459	1110
23	461	722	1720	820	7420	4360	780	1480	1910	413	385	5540
24	367	528	1710	740	5500	3580	797	1490	1710	373	385	3800
25	418	466	4020	675	2840	2700	766	1280	1340	298	410	2310
26	387	406	2980	610	2220	2330	753	1220	1080	296	375	2080
27	381	411	2020	558	2220	1880	1110	1850	798	669	456	2210
28	347	454	2020	505	2070	1660	2920	2020	1030	1440	459	1860
29	222	710	1710	475	---	1460	4250	1290	1150	1260	420	1340
30	216	700	1340	500	---	1280	5870	1060	946	881	399	1220
31	211	---	804	530	---	908	---	858	---	838	1580	---
TOTAL	7619	16187	28339	58331	75672	68528	46103	133208	91168	27638	23482	48195
MEAN	246	540	914	1882	2703	2211	1537	4297	3039	892	757	1606
MAX	485	1300	4020	7210	8270	5680	5870	14700	11700	2850	2600	5590
MIN	154	209	316	475	565	908	753	858	709	296	263	432

CAL YR 1988 TOTAL 197385 MEAN 539 MAX 4020 MIN 152
WTR YR 1989 TOTAL 624470 MEAN 1711 MAX 14700 MIN 154

03210000 JOHNS CREEK NEAR META, KY

LOCATION.--Lat 37°34'01", long 82°27'29", Pike County, Hydrologic Unit 05070203, on left bank 10 ft downstream from bridge on U.S. Highway 119, 1,100 ft downstream from Ford Branch, 0.7 mi upstream from Raccoon Creek, 1.2 mi southwest of Meta, and at mile 42.7.

DRAINAGE AREA.--56.3 mi^2.

PERIOD OF RECORD.--May 1941 to current year.

REVISED RECORDS.--WSP 1705: Drainage area. WRD KY-76-1: 1975. WDR KY-87-1: 1986.

GAGE:--Water-stage recorder. Datum of gage is 715.66 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, water-stage recorder at site 1,200 ft upstream at datum 1.52 ft higher. Oct. 1, 1964 to Dec. 21, 1965, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 9-16, 18-21, Feb. 8-10, July 31, Aug. 1, 6, Sept. 10. Records fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--48 years, 69.1 ft^3/s, 16.67 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,380 ft^3/s, Mar. 12, 1963, gage height, 17.38 ft, from floodmark, site and datum then in use, from rating curve extended above 1,900 ft^3/s, on basis of contracted-opening measurement at gage height, 14.54 ft, former site and datum; maximum gage height, 19.62 ft May 7, 1984; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1939 reached a stage of 15.6 ft, from floodmark, present datum, at site 600 ft upstream, discharge, 4,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 6	0830	1,860	*14.17	June 16	0130	*2,060	13.66
May 5	2300	2,050	13.64				

Minimum daily discharge, 0.42 ft^3/s, Dec. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	14	13	7.0	5.5	54	55	253	21	17	102	28
2	37	15	7.3	4.1	5.2	45	48	346	22	16	57	70
3	29	11	5.5	3.0	44	41	72	240	20	17	36	34
4	19	11	4.8	2.9	201	37	230	162	15	116	25	23
5	9.6	205	3.7	2.2	171	48	374	649	16	65	19	16
6	9.4	306	3.1	15	132	983	361	1230	26	39	32	13
7	8.9	234	2.9	39	98	294	338	858	50	32	15	11
8	5.3	179	2.6	83	64	193	359	407	33	25	13	11
9	5.2	132	2.4	70	50	141	371	501	70	21	9.3	9.3
10	3.4	58	1.8	40	45	97	339	718	64	18	8.4	7.8
11	3.0	31	1.1	32	38	66	251	346	43	16	7.6	24
12	2.1	23	.72	392	33	47	118	251	44	14	7.3	17
13	2.7	21	1.4	567	76	55	90	189	111	16	7.0	13
14	3.2	121	1.6	226	198	106	75	142	67	15	7.0	13
15	2.4	148	1.8	397	226	93	78	167	510	11	6.2	21
16	2.7	157	1.7	235	278	74	66	158	1070	11	6.7	178
17	2.5	279	1.6	158	267	59	55	137	828	9.6	5.0	77
18	2.7	137	.97	106	206	72	49	110	302	8.4	29	42
19	3.6	46	.47	66	168	73	47	83	178	7.9	14	30
20	5.4	134	.42	43	145	84	43	83	149	7.6	15	23
21	29	104	102	27	285	205	39	64	104	9.8	41	21
22	273	92	250	18	293	223	36	51	68	11	34	61
23	350	65	186	13	223	180	34	59	52	7.1	18	235
24	264	16	368	9.6	173	183	32	48	43	5.9	15	161
25	206	6.9	296	8.2	137	163	31	42	34	5.9	16	84
26	238	5.7	163	6.2	122	133	29	51	29	5.6	13	69
27	198	12	100	4.8	98	104	44	59	29	132	11	55
28	134	26	39	4.1	73	84	112	48	32	98	9.5	43
29	34	27	15	3.7	---	71	172	40	29	71	8.5	36
30	29	21	8.2	6.8	---	65	226	31	20	63	49	38
31	20	---	6.6	6.1	---	68	---	24	---	87	21	---
TOTAL	1975.1	2637.6	1592.68	2595.7	3856.7	4141	4174	7547	4079	978.8	657.5	1464.1
MEAN	63.7	87.9	51.4	83.7	138	134	139	243	136	31.6	21.2	48.8
MAX	350	306	368	567	293	983	374	1230	1070	132	102	235
MIN	2.1	5.7	.42	2.2	5.2	37	29	24	15	5.6	5.0	7.8
CFSM	1.13	1.56	.91	1.49	2.45	2.37	2.47	4.32	2.42	.56	.38	.87
IN.	1.31	1.74	1.05	1.72	2.55	2.74	2.76	4.99	2.70	.65	.43	.97

CAL YR 1988 TOTAL 15412.78 MEAN 42.1 MAX 448 MIN .42 CFSM .75 IN. 10.18
WTR YR 1989 TOTAL 35699.18 MEAN 97.8 MAX 1230 MIN .42 CFSM 1.74 IN. 23.59

BIG SANDY RIVER BASIN

03211500 JOHNS CREEK NEAR VAN LEAR, KY

LOCATION.--Lat 37°44'37", long 82°43'27", Floyd County, Hydrologic Unit 05070203, on right bank 100 ft upstream from Long Branch, 0.3 mi upstream from Daniels Creek, 0.7 mi downstream from Dewey Dam, 2.5 mi southeast of Van Lear, and at mile 4.7.

DRAINAGE AREA.--206 mi^2.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 597.28 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Aug. 14, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 20, 21. Records good. Flow regulated since May 1950 by Dewey Lake (station 03211000). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--50 years, 231 ft^3/s, 15.23 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft^3/s, Jan. 9, 1946, gage height, 26.50 ft from rating curve extended above 3,100 ft^3/s; maximum gage height, 27.88 ft, Jan. 30, 1957, (backwater from Levisa Fork); no flow at times during 1957-58, 1962-63, 1973-75, due to closing of outflow gates at Dewey Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft^3/s, Mar. 6, gage height, 14.43 ft; minimum daily discharge, 7.8 ft^3/s, July 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	57	93	69	113	266	13	865	146	64	305	88
2	42	67	93	145	113	210	13	1080	52	64	747	145
3	38	74	92	187	346	179	13	866	36	65	660	148
4	22	74	92	185	643	146	15	481	52	65	490	69
5	20	147	92	106	766	476	14	544	52	167	144	49
6	20	182	92	67	670	2130	369	599	153	143	143	49
7	20	180	92	111	386	2570	582	142	242	33	98	188
8	20	179	71	205	238	2370	509	392	291	121	72	104
9	20	177	37	382	185	1420	477	1910	188	72	72	29
10	20	110	59	468	123	467	414	2450	164	33	44	29
11	20	74	72	294	113	368	384	2420	142	33	32	29
12	19	73	70	562	145	305	252	2440	143	33	31	29
13	19	83	70	1730	319	337	191	1790	289	33	31	31
14	19	72	72	1540	938	320	191	745	275	18	31	31
15	18	72	72	1260	1240	268	276	442	893	7.8	31	402
16	18	72	72	1220	1590	268	220	492	535	7.8	31	891
17	17	72	72	700	1390	267	191	361	406	39	31	363
18	16	133	71	481	779	224	191	295	953	42	375	244
19	15	242	71	318	551	221	143	294	2210	31	178	164
20	15	505	70	234	880	275	67	230	2360	26	30	96
21	15	616	72	185	1400	950	119	201	2410	21	150	96
22	16	425	250	149	1680	1040	143	139	2430	14	193	326
23	16	204	444	90	862	670	143	161	1910	14	176	597
24	16	151	651	90	461	541	143	197	383	14	130	719
25	17	83	1020	90	424	538	143	115	106	14	63	444
26	17	79	1050	122	292	307	78	155	124	13	64	305
27	17	112	660	109	238	294	85	197	96	92	47	284
28	17	152	308	69	266	356	188	115	219	759	31	158
29	17	143	187	98	---	261	665	77	134	726	31	90
30	17	110	187	113	---	119	1030	76	64	191	289	190
31	18	---	111	113	---	13	---	135	---	265	161	---
TOTAL	601	4720	6465	11492	17151	18176	7262	20406	17458	3220.6	4911	6387
MEAN	19.4	157	209	371	613	586	242	658	582	104	158	213
MAX	42	616	1050	1730	1680	2570	1030	2450	2430	759	747	891
MIN	15	57	37	67	113	13	13	76	36	7.8	30	29

CAL YR 1988 TOTAL 31421.2 MEAN 85.9 MAX 1050 MIN 2.6
WTR YR 1989 TOTAL 118249.6 MEAN 324 MAX 2570 MIN 7.8

03212500 LEVISA FORK AT PAINTSVILLE, KY

LOCATION.--Lat 37°48'55", long 82°47'30", Johnson County, Hydrologic Unit 05070203, on left bank 700 ft downstream from bridge on State Highway 40 at Paintsville, 900 ft downstream from Paint Creek, and at mile 65.2.

DRAINAGE AREA.--2,144 mi^2.

PERIOD OF RECORD.--June 1915 to September 1916, October 1916 to November 1920 (gage heights only), and October 1928 to current year. Monthly discharge only for October to December 1928, published in WSP 1305. Published as "at Thelma" prior to 1928.

REVISED RECORDS.--WSP 953: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 566.84 ft above National Geodetic Vertical Datum of 1929. June 1, 1915 to Nov. 9, 1920, nonrecording gage at site 3.4 mi downstream at different datum. Dec. 22, 1928 to Apr. 5, 1940, nonrecording gage, Apr. 6, 1940 to Oct. 23, 1953, water-stage recorder, and Oct. 24, 1953 to Oct. 19, 1954, nonrecording gage, at bridge 400 ft upstream at present datum.

REMARKS.--Estimated daily discharges: June 7, 26-29, July 29 to Aug. 7, 14-28, Sept. 1-6. Records poor. Flow regulated since October 1968 by Fishtrap Lake (station 03207995), since August 1966 by North Fork Pound River Lake (station 03208680), since March 1965 by John W. Flannagan Lake (station 03208990), and since May 1950 by Dewey Lake (station 03211000). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--62 years (Water years 1916, 1929-89), 2,451 ft^3/s, 15.52 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 69,700 ft^3/s, Jan. 31, 1957, gage height, 45.92 ft; minimum, 8.4 ft^3/s, July 23-25, 1930, gage-height, 1.06 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1862 reached a stage of 46.6 ft, from levels to floodmark by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,500 ft^3/s, June 17, gage height, 24.29 ft; minimum daily, 270 ft^3/s, Aug. 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	808	388	1180	1430	1010	4180	1980	8460	1270	1360	1900	1120
2	649	411	971	1290	1030	3600	2060	9220	1190	1410	3000	800
3	483	417	899	1400	1990	3280	2420	11000	1150	1510	4200	860
4	443	418	865	1580	3290	3120	3400	9100	1130	1430	2200	980
5	377	528	862	1300	3460	3890	4920	5870	1150	1750	1350	1180
6	374	762	812	1220	3570	10300	4850	11800	3860	2060	1450	680
7	371	1000	805	1620	3650	11500	4140	17500	9000	1780	1150	704
8	344	976	839	1840	3670	11600	3690	15900	4360	2830	999	708
9	315	974	725	2430	3450	8660	3630	15100	3110	2760	760	605
10	292	949	692	2690	2900	5190	3390	18400	2950	1810	624	591
11	285	865	677	2680	2210	3430	3060	16300	2880	1230	522	590
12	310	714	654	2930	1770	2950	2860	12900	2120	916	443	730
13	318	670	635	6090	1660	2920	2560	10000	2300	826	326	820
14	315	624	623	10100	2830	3550	2360	7050	2990	847	310	803
15	314	622	598	10000	4740	3380	2390	4750	4170	892	290	2500
16	313	759	628	11600	6700	3550	2410	5030	11800	740	270	3320
17	315	726	694	9010	8330	3280	2220	4830	16400	627	270	3770
18	318	940	666	6060	8880	2800	2140	3630	18200	671	540	3550
19	321	1500	631	4290	8590	2550	2220	2950	15500	639	2000	2320
20	318	3230	617	2910	8020	3100	2000	2750	12800	905	1600	1630
21	336	3420	731	2100	8390	7010	1770	2690	10200	1050	1200	1190
22	378	2470	1660	1660	14300	9450	1650	2480	8190	815	900	1410
23	445	1950	2660	1370	18100	9170	1540	2600	6510	573	700	5380
24	682	1260	3960	1280	13300	6780	1550	3070	4190	558	730	7810
25	570	1020	6770	1240	8290	5590	1570	2410	2990	538	760	4670
26	622	900	6760	1120	5470	4560	1400	2120	2300	587	660	3360
27	567	862	4850	1030	4630	3710	1380	2240	1900	772	680	3010
28	551	968	3430	939	4570	3450	2620	2790	1700	2160	700	2650
29	532	1050	2970	862	---	3000	4900	2390	2300	1990	646	2140
30	417	1260	2450	868	---	2690	7190	1750	1520	1600	752	1730
31	382	---	2130	890	---	2250	---	1460	---	1450	935	---
TOTAL	13065	32633	53444	95829	158800	154490	84270	218540	160130	39086	32867	61611
MEAN	421	1088	1724	3091	5671	4984	2809	7050	5338	1261	1060	2054
MAX	808	3420	6770	11600	18100	11600	7190	18400	18200	2830	4200	7810
MIN	285	388	598	862	1010	2250	1380	1460	1130	538	270	590

CAL YR 1988 TOTAL 337339 MEAN 922 MAX 6770 MIN 215
WTR YR 1989 TOTAL 1104765 MEAN 3027 MAX 18400 MIN 270

03215000 BIG SANDY RIVER AT LOUISA, KY
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°10'16", long 82°38'05", Lawrence County, Hydrologic Unit 05070204, at gaging station 1.7 mi upstream from Blaine Creek, 4.3 mi northwest of Louisa, and at mile 21.3.

DRAINAGE AREA.--3,897 mi^2.

PERIOD OF RECORD.--Water years 1950, 1966-72, 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1981.
WATER TEMPERATURE: October 1974 to September 1981.

REMARKS.--Flow regulated by Fishtrap Lake, North Fork Pound River Lake, John W. Flannagan Lake and Dewey Lake.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 1988											
22...	1130	338	L739	L7.80	16.5	7.5	9.3	97	270	220	220
JAN 1989											
10...	1130	5000	L378	8.10	1.5	57	12.4	89	>1200	K2300	130
FEB											
09...	1230	5950	380	7.50	1.5	23	10.3	74	1200	430	130
APR											
04...	1400	5510	360	7.20	13.5	25	9.8	94	K1500	--	130
JUN											
28...	1400	3330	L452	7.65	25.0	22	7.6	94	2000	330	160
AUG											
31...	1130	2900	580	8.45	23.5	430	8.3	99	31000	3900	--

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1988											
22...	100	49	24	75	4.1	--	--	L122	39	200	0.10
JAN 1989											
10...	67	30	14	26	2.8	86	67	66	12	98	0.10
FEB											
09...	54	28	14	21	2.4	89	73	74	12	92	0.10
APR											
04...	73	30	14	21	2.6	70	57	60	8.4	99	0.10
JUN											
28...	81	37	16	24	3.1	140	115	111	10	130	0.10
AUG											
31...	--	--	--	--	--	--	--	L115	22	150	0.20

03215000 BIG SANDY RIVER AT LOUISA, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 1988											
22...	1.1	476	467	<0.010	0.200	0.060	0.090	0.20	0.030	0.030	0.020
JAN 1989											
10...	6.8	222	232	<0.010	0.570	0.070	0.050	0.40	0.020	0.010	0.010
FEB											
09...	7.2	220	223	<0.010	0.390	0.020	0.060	0.50	0.040	0.010	0.010
APR											
04...	7.1	224	220	<0.010	0.350	0.040	0.020	0.70	0.060	<0.010	<0.010
JUN											
28...	8.3	285	278	0.020	0.520	0.030	0.060	0.20	0.020	0.020	<0.010
AUG											
31...	--	371	--	0.010	0.410	0.140	0.150	0.50	0.130	0.180	0.120

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 1988											
22...	30	1	77	<0.5	7	<1	<3	9	13	<5	22
JAN 1989											
10...	20	<1	37	<0.5	1	<1	<3	4	22	<5	11
FEB											
09...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	30	<1	42	<0.5	<1	<1	<3	1	27	<5	11
JUN											
28...	60	<1	55	<0.5	<1	<1	<3	3	38	1	19
AUG											
31...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1988											
22...	70	<10	2	<1	<1.0	680	<6	48	13	12	61
JAN 1989											
10...	15	<10	<1	<1	1.0	310	<6	7	91	1230	92
FEB											
09...	--	--	--	--	--	--	--	--	165	2650	25
APR											
04...	19	<10	2	1	1.0	340	<6	17	64	952	81
JUN											
28...	23	10	2	1	<1.0	400	<6	59	60	539	88
AUG											
31...	--	--	--	--	--	--	--	--	--	--	--

03216350 LITTLE SANDY RIVER BELOW GRAYSON DAM, NEAR LEON, KY

LOCATION.--Lat 38°15,14", long 82°59'28", Carter County, Hydrologic Unit 05090104, on right bank 0.3 mi downstream from Grayson Dam (new channel), 0.3 mi upstream from Big Sinking Creek, 2.4 mi southwest of Leon, and at mile 50.3.

DRAINAGE AREA.--196 mi^2.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Flow regulated since March 1968 by Grayson Lake (station 03216300). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--23 years, 240 ft^3/s, 16.63 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,600 ft^3/s, Mar. 7, 1967; no flow at times some years, due to closing of outflow gates at Grayson Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,380 ft^3/s, Feb. 15, gage height, 102.26 ft; minimum daily, 13 ft^3/s, Apr. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	80	128	262	79	2780	28	212	55	56	33	50
2	30	79	135	260	79	2780	13	389	28	41	33	31
3	30	41	134	430	477	2390	14	429	28	127	33	31
4	30	29	115	518	1120	2110	250	422	28	160	33	31
5	29	38	89	259	1210	1760	651	466	28	267	33	31
6	29	39	81	160	1200	1070	653	569	26	308	33	31
7	29	66	80	194	1180	1310	678	617	26	177	33	31
8	29	124	81	465	873	2720	621	671	26	54	33	26
9	29	145	73	809	305	2890	627	797	26	37	33	21
10	29	145	69	1220	80	2730	470	896	26	37	33	22
11	29	146	69	1190	80	2290	433	1850	26	36	33	22
12	29	146	68	1240	79	2220	393	2180	26	31	33	21
13	28	147	68	1120	362	1910	183	1200	47	31	33	21
14	28	149	67	909	1180	918	148	345	125	31	33	21
15	28	121	68	1130	2570	120	154	211	316	31	33	22
16	28	80	68	1350	1470	131	153	368	783	31	33	24
17	28	70	67	1820	663	134	259	214	809	31	33	23
18	28	87	67	905	2170	135	299	88	329	31	33	54
19	28	303	67	158	2810	137	250	86	169	32	33	67
20	45	1120	67	184	2540	197	157	167	176	35	33	67
21	61	538	139	179	1880	750	142	172	179	31	164	67
22	61	1540	335	175	1660	555	118	84	173	65	47	70
23	61	2280	707	195	2810	494	116	209	278	102	34	312
24	61	2200	1060	212	2780	468	115	425	317	101	33	637
25	88	1970	301	133	2780	451	113	468	235	61	84	817
26	87	1530	428	82	2790	439	101	209	146	45	102	811
27	82	1410	1070	81	2800	430	64	82	72	37	101	661
28	81	1250	1490	81	2770	422	83	81	132	33	100	290
29	81	454	1740	80	---	418	97	80	270	33	99	78
30	80	101	1750	80	---	191	97	93	173	33	99	57
31	80	---	783	80	---	37	---	89	---	33	99	---
TOTAL	1416	16428	11464	15961	40797	35387	7480	14169	5078	2158	1622	4447
MEAN	45.7	548	370	515	1457	1142	249	457	169	69.6	52.3	148
MAX	88	2280	1750	1820	2810	2890	678	2180	809	308	164	817
MIN	28	29	67	80	79	37	13	80	26	31	33	21

CAL YR 1988 TOTAL 61200 MEAN 167 MAX 2280 MIN 17
WTR YR 1989 TOTAL 156407 MEAN 429 MAX 2890 MIN 13

03216500 LITTLE SANDY RIVER AT GRAYSON, KY

LOCATION.--Lat 38°19'48", long 82°56'22", Carter County, Hydrologic Unit 05090104, on left bank 0.3 mi upstream from bridge on U.S. Highway 60, 0.5 mi downstream from Town Branch, 0.5 mi east of Grayson, and at mile 38.1.

DRAINAGE AREA.--400 mi^2.

PERIOD OF RECORD.--April 1938 to current year. Prior to October 1964, published as "near Grayson."

REVISED RECORDS.--WSP 1435: 1939(M), 1943(M), 1948(P). WSP 1725: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 557.95 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 11, 1939, nonrecording gage and Aug. 11, 1939 to Jan. 29, 1965, water-stage recorder at site 1.6 mi downstream at same datum. Apr. 6, 1948 to Jan. 29, 1965, supplementary nonrecording gage 800 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since March 1968 by Grayson Lake (station 03216300). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--51 years, 470 ft^3/s, 15.96 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,500 ft^3/s, Sept. 22, 1950; maximum gage height, 27.53 ft Sept. 22, 1950; site then in use, present datum; minimum discharge observed, 1.5 ft^3/s Oct. 12, 1953. Flood of Sept. 22, 1950, is the highest flood since at least 1884, according to local residents.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1937 reached a stage of 25.0 ft, present datum, from floodmarks at site 1.6 mi downstream, discharge, 16,600 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,100 ft^3/s, Feb. 16, gage height, 26.91 ft; minimum, 28 ft^3/s, Nov. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	94	225	482	173	2990	626	534	162	185	84	132
2	34	93	228	497	167	2970	441	829	101	148	72	109
3	33	87	218	541	978	2730	412	819	90	428	66	65
4	32	32	202	653	2620	2290	759	729	85	574	60	54
5	32	50	167	499	1880	3400	1450	907	85	550	58	49
6	31	67	146	341	1530	6420	1190	1250	107	503	58	46
7	31	94	141	489	1420	4410	1110	1190	104	397	58	44
8	31	145	138	1710	1180	3540	1030	1060	89	199	58	42
9	31	183	131	1350	599	3410	1160	1540	97	119	57	34
10	31	180	117	1580	257	3240	978	2810	118	102	55	32
11	31	182	113	1420	246	2670	747	2640	94	91	53	216
12	30	193	106	1780	232	2500	744	3010	83	79	52	87
13	30	186	106	2100	567	2240	533	2180	123	106	51	55
14	31	179	104	1470	5310	1540	423	882	296	147	50	45
15	31	168	105	2680	8130	421	443	579	504	93	49	64
16	31	122	104	1880	10000	358	459	681	1520	77	49	632
17	31	94	103	2290	4730	334	474	593	1290	69	50	481
18	32	98	100	1630	2660	336	539	351	701	64	66	210
19	33	680	99	438	3410	400	624	303	349	97	84	172
20	32	4590	98	410	3070	416	478	323	357	196	67	145
21	71	3150	229	364	6660	2680	435	406	374	184	326	127
22	75	1670	796	334	5220	1810	380	257	450	115	595	218
23	78	2630	1090	324	3890	1050	359	422	472	163	226	1850
24	87	2530	2860	337	3360	866	342	693	500	152	151	1540
25	101	2430	2620	295	3180	760	327	655	410	131	289	1140
26	120	1770	907	204	3180	686	319	502	267	79	205	1050
27	102	1580	1160	195	3110	635	296	266	217	75	171	883
28	98	1520	1830	182	3060	597	450	232	547	64	157	548
29	97	842	2010	174	---	577	507	205	451	62	145	223
30	95	214	2240	176	---	565	499	197	372	64	138	156
31	94	---	1290	179	---	590	---	193	---	79	141	---
TOTAL	1651	25853	19783	27004	80819	57431	18554	27238	10415	5392	3741	10449
MEAN	53.3	862	638	871	2886	1853	618	879	347	174	121	348
MAX	120	4590	2860	2680	10000	6420	1450	3010	1520	574	595	1850
MIN	30	32	98	174	167	334	296	193	83	62	49	32

CAL YR 1988 TOTAL 113740 MEAN 311 MAX 4590 MIN 30
WTR YR 1989 TOTAL 288330 MEAN 790 MAX 10000 MIN 30

03216540 EAST FORK LITTLE SANDY RIVER NEAR FALLSBURG, KY

LOCATION.--Lat 38°14'01", long 82°42'32", Lawrence County, Hydrologic Unit 05090104, on left bank 15 ft upstream from bridge on State Highway 3, 300 ft upstream from Seedtick Branch, 0.5 mi downstream from Lambert Branch, 4.4 mi northwest of Fallsburg, and at mile 37.8.

DRAINAGE AREA.--12.2 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 661.40 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 12-23, Dec. 2 to Jan. 4, and Jan. 17 to Feb. 1. Records fair except those for estimated daily discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--17 years, 15.0 ft^3/s, 16.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft^3/s, Feb. 15, 1989, gage height, 10.45 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 8	1000	633	8.07	Mar. 6	0445	644	8.14
Feb. 15	1115	*1,600	*10.45	Sept. 23	1515	516	7.64
Feb. 21	0615	979	9.14				

Minimum daily discharge, 0.01 ft^3/s, Oct. 13-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.32	.20	4.6	10	2.5	6.2	27	27	3.3	1.0	2.6	3.4
2	.30	.20	3.4	7.5	3.7	7.3	19	36	3.1	1.3	2.3	4.8
3	.29	.16	2.6	5.6	210	7.5	18	22	2.9	82	2.1	2.8
4	.24	.16	2.0	4.8	66	7.6	30	16	2.8	38	2.0	2.3
5	.20	.64	1.6	4.3	22	234	25	38	3.2	18	1.9	2.2
6	.14	5.3	1.3	28	15	407	19	39	6.4	25	2.0	2.0
7	.08	3.7	1.0	24	9.0	48	17	31	7.4	8.0	2.0	1.9
8	.04	2.7	.78	253	4.4	25	22	22	5.2	5.2	1.9	1.9
9	.03	2.1	.63	31	2.8	16	29	151	8.7	4.0	1.8	1.9
10	.03	1.9	.50	16	4.4	12	20	80	6.5	3.6	1.8	2.0
11	.02	3.0	.47	12	4.1	12	12	27	4.4	3.3	1.7	22
12	.02	2.5	.44	97	3.5	11	12	19	3.6	3.1	1.6	4.8
13	.01	2.2	.41	44	136	10	12	15	17	55	1.6	3.3
14	.01	1.9	.44	55	408	10	10	13	23	18	1.6	3.0
15	.01	1.6	.45	144	742	9.6	14	16	97	6.6	1.6	14
16	.01	2.0	.38	26	290	7.9	13	16	83	4.6	1.5	110
17	.01	3.8	.34	8.3	52	7.3	12	12	20	3.9	1.5	19
18	.01	6.4	.31	6.2	27	13	11	9.3	8.4	3.2	5.9	8.3
19	.01	60	.28	4.9	13	15	17	7.7	5.9	3.0	3.1	5.9
20	.02	235	.26	4.1	19	22	15	7.8	5.8	5.2	2.3	4.7
21	.06	54	71	3.9	491	271	13	8.9	3.8	3.4	105	3.9
22	.18	22	42	2.9	49	33	12	6.5	3.1	2.9	56	54
23	.21	7.8	23	2.6	24	26	11	54	2.7	2.7	15	294
24	.34	5.5	235	2.2	7.7	22	10	21	2.5	2.4	8.6	41
25	.33	4.8	78	2.7	9.1	18	9.5	12	1.8	2.3	8.3	15
26	.31	4.5	27	2.6	14	15	9.4	8.7	1.5	2.1	4.9	12
27	.27	4.5	13	2.4	12	13	14	7.1	1.2	2.1	3.7	7.2
28	.26	6.5	34	2.2	11	12	19	6.0	2.5	2.2	3.1	5.2
29	.23	5.5	26	2.5	---	11	44	5.3	1.6	2.2	2.8	4.5
30	.23	4.8	19	2.9	---	12	25	4.4	1.2	2.2	2.6	4.1
31	.20	---	14	2.7	---	28	---	3.7	---	3.6	2.4	---
TOTAL	4.42	455.36	604.19	815.3	2652.2	1349.4	520.9	742.4	339.5	320.1	255.2	661.1
MEAN	.14	15.2	19.5	26.3	94.7	43.5	17.4	23.9	11.3	10.3	8.23	22.0
MAX	.34	235	235	253	742	407	44	151	97	82	105	294
MIN	.01	.16	.26	2.2	2.5	6.2	9.4	3.7	1.2	1.0	1.5	1.9
CFSM	.01	1.24	1.60	2.16	7.76	3.57	1.42	1.96	.93	.85	.67	1.81
IN.	.01	1.39	1.84	2.49	8.09	4.11	1.59	2.26	1.04	.98	.78	2.02

CAL YR 1988 TOTAL 3137.37 MEAN 8.57 MAX 343 MIN .00 CFSM .70 IN. 9.57
WTR YR 1989 TOTAL 8720.07 MEAN 23.9 MAX 742 MIN .01 CFSM 1.96 IN. 26.59

03216600 OHIO RIVER AT GREENUP DAM, KY

LOCATION.--Lat 38°38'48", long 82°51'38", Greenup County, Hydrologic Unit 05090103, at left bank at downstream end of lock guidewall in lower pool at Greenup locks, 1.1 mi upstream from Grays Branch, 4.7 mi downstream from Little Sandy River, 5.0 mi north of Greenup, and at mile 341.5.

DRAINAGE AREA.--62,000 mi^2, approximately.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 472.43 ft above National Geodetic Vertical Datum of 1929 or 472.97 ft Ohio River Datum. Record of Greenup Dam headwater, tailwater, gate openings and lockages used to determine discharge from Oct. 1, 1968 to Sept. 30, 1981. Auxiliary water-stage recorder is located at Portsmouth, Ohio, 14.1 mi downstream, established Oct. 1, 1981 and used in slope rating computation from Oct. 1, 1981 to Sept. 30, 1983. Datum of gage is 470.43 National Geodetic Vertical Datum of 1929 or 470.99 Ohio River Datum. Since Oct. 1, 1983, discharge has been computed using the Branch Flow Model. Stage record for this model is obtained from the Greenup Dam Tailwater and Portsmouth, Ohio gages.

REMARKS.--Estimated daily discharges: June 3-6, 9-14. Records good except those for estimated daily discharges and those below 20,000 ft^3/s, which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream from station.

AVERAGE DISCHARGE.--21 years, 89,440 ft^3/s, 19.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 540,000 ft^3/s, Jan. 12, 1974, maximum observed headwater gage height, 30.63 ft, Feb. 28, 1979, maximum tailwater gage height, 59.19 ft, Feb. 28, 1979; minimum daily discharge, 4,930 ft^3/s, Sept. 25, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 390,000 ft^3/s, Feb. 17; maximum gage height, 49.47 ft, Feb. 17; minimum daily discharge, 9,130 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11900	20700	38900	82700	70100	103000	281000	239000	92200	139000	39500	39500
2	12600	19600	44400	78800	72200	83200	301000	222000	89000	110000	26200	36000
3	13000	16300	33500	72000	92600	73100	278000	243000	82000	84000	28900	20300
4	12800	17400	31900	72500	163000	62200	222000	236000	82000	75200	29400	15100
5	12600	24100	27300	69800	183000	84200	225000	203000	83000	87300	29400	19900
6	12100	40800	20900	55500	142000	218000	226000	209000	90000	86000	64100	19900
7	13300	56900	27900	79000	95300	344000	224000	281000	93300	103000	46900	14300
8	15000	52400	30300	101000	83400	367000	211000	281000	107000	93400	38300	14200
9	10000	43100	31100	119000	60100	335000	202000	245000	115000	78200	22800	28500
10	9130	43700	26300	121000	45100	234000	193000	258000	100000	70600	23700	18400
11	9340	48500	22300	121000	35600	166000	173000	319000	105000	74400	24200	13800
12	11200	42800	15000	119000	33300	129000	150000	356000	86000	46200	17700	25200
13	14600	38200	14400	144000	40700	119000	125000	284000	92000	68600	17600	16500
14	12200	38000	20500	194000	110000	111000	109000	331000	110000	72100	16200	23700
15	10200	44700	19600	232000	218000	97200	102000	299000	102000	47800	14300	39400
16	17700	48600	15100	240000	339000	86300	83100	287000	218000	45000	14800	96200
17	19000	45400	15900	221000	390000	78500	69900	278000	311000	31700	15400	145000
18	16000	33500	22100	179000	372000	71800	60000	260000	328000	46200	22400	108000
19	12100	39900	20500	130000	277000	65300	81500	234000	304000	49500	23000	63800
20	11600	94800	16600	85800	184000	65500	92700	195000	245000	39200	29100	50700
21	16300	152000	19600	69300	204000	138000	87800	162000	212000	55400	37700	41400
22	27800	151000	39600	52000	287000	227000	72000	130000	249000	56700	59300	36900
23	25200	126000	67300	49200	312000	237000	64100	110000	291000	27400	80400	110000
24	19500	101000	96700	40600	285000	194000	53900	111000	277000	38200	115000	179000
25	26500	81600	180000	38400	220000	165000	47900	116000	223000	39200	145000	135000
26	29600	62800	195000	46900	178000	153000	107000	113000	194000	27100	119000	106000
27	29200	46800	154000	42200	142000	141000	179000	162000	162000	35400	71200	82800
28	20800	47300	116000	52600	121000	114000	210000	181000	153000	61000	49600	71500
29	15500	47500	108000	67800	---	98600	203000	161000	181000	54400	36300	51200
30	15100	34300	105000	66300	---	123000	263000	128000	177000	40600	54900	42000
31	17100	---	103000	65100	---	212000	---	104000	---	35100	44800	---
TOTAL	498970	1659700	1678700	3107500	4755400	4695900	4696900	6738000	4953500	1917900	1357100	1664200
MEAN	16100	55320	54150	100200	169800	151500	156600	217400	165100	61870	43780	55470
MAX	29600	152000	195000	240000	390000	367000	301000	356000	328000	139000	145000	179000
MIN	9130	16300	14400	38400	33300	62200	47900	104000	82000	27100	14300	13800

CAL YR 1988 TOTAL 18041040 MEAN 49290 MAX 310000 MIN 6750
WTR YR 1989 TOTAL 37723770 MEAN 103400 MAX 390000 MIN 9130

TYGARTS CREEK BASIN

03216800 TYGARTS CREEK AT OLIVE HILL, KY

LOCATION.--Lat 38°17'57", long 83°10'25", Carter County, Hydrologic Unit 05090103, on left bank 100 ft downstream from county road 986 at Olive Hill, 0.3 mi downstream from Henderson Branch, 0.6 mi upstream from Bens Run, and at mile 78.0.

DRAINAGE AREA.--59.6 mi^2.

PERIOD OF RECORD.--January 1957 to current year.

REVISED RECORDS.--WRD KY-79: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 739.18 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--32 years, 85.0 ft^3/s, 19.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,470 ft^3/s, Apr. 22, 1972, gage height, 17.06 ft; maximum gage height, 19.04 ft, Mar. 12, 1975; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1100	4,710	13.10	Mar. 6	0200	2,820	9.88
Dec. 24	1500	4,980	13.55	May 9	1700	2,210	8.72
Feb. 14	1000	3,200	10.58	Aug. 21	1500	3,140	10.46
Feb. 15	1100	*7,780	*17.70	Sept. 23	1900	2,670	9.60
Feb. 21	0700	3,900	11.81				

Minimum daily discharge, 0.08 ft^3/s, Oct. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	1.1	29	89	40	63	111	92	25	53	22	15
2	.19	.93	23	75	33	56	88	95	20	104	6.6	19
3	.13	.76	19	63	844	52	100	74	16	73	2.8	5.4
4	.10	.90	15	50	486	48	529	65	11	65	2.0	2.6
5	.08	14	10	40	225	1090	311	119	37	56	1.8	1.7
6	.08	43	8.2	124	143	1520	126	121	76	45	32	1.4
7	.17	39	7.2	128	103	221	103	98	47	31	17	1.1
8	.19	35	5.8	766	76	117	125	82	31	18	3.6	.96
9	.20	27	4.3	255	62	92	146	731	85	6.8	2.0	.83
10	.20	28	3.4	135	79	78	103	372	68	3.4	1.3	5.4
11	.20	48	3.2	95	55	69	84	132	50	2.4	.91	44
12	.19	32	2.5	621	40	62	72	99	37	2.4	.69	7.6
13	.21	30	2.4	354	608	58	64	81	91	19	.51	2.6
14	.22	28	2.6	535	1980	56	57	68	90	13	.41	5.4
15	.23	22	2.8	727	3750	55	61	94	197	2.9	.32	66
16	.26	19	2.4	254	1480	48	55	80	194	1.8	.26	374
17	.32	21	2.0	145	490	44	51	67	119	1.3	.24	136
18	.53	16	1.8	103	264	52	49	58	90	.99	1.4	72
19	.32	551	1.8	75	176	58	88	53	87	644	2.2	52
20	.23	1990	1.9	59	146	131	69	62	110	235	.95	37
21	.89	293	549	44	1880	1100	61	55	167	92	840	24
22	14	116	274	36	540	161	55	49	214	61	265	215
23	20	69	543	32	262	109	52	83	138	41	79	1800
24	45	50	1810	27	158	87	48	74	99	25	56	1370
25	25	38	505	24	122	74	42	61	79	10	63	250
26	9.6	29	179	25	115	64	38	60	65	3.6	45	105
27	2.6	36	106	29	96	58	49	57	58	11	37	69
28	1.7	49	229	23	78	53	55	49	63	47	17	56
29	1.5	42	187	21	---	52	72	42	47	10	6.4	49
30	1.3	36	116	41	---	64	99	36	30	22	46	44
31	1.2	---	83	48	---	139	---	30	---	50	22	---
TOTAL	127.12	3704.69	4729.3	5043	14331	5931	2963	3239	2441	1750.59	1575.39	4831.99
MEAN	4.10	123	153	163	512	191	98.8	104	81.4	56.5	50.8	161
MAX	45	1990	1810	766	3750	1520	529	731	214	644	840	1800
MIN	.08	.76	1.8	21	33	44	38	30	11	.99	.24	.83
CFSM	.07	2.07	2.56	2.73	8.59	3.21	1.66	1.75	1.37	.95	.85	2.70
IN.	.08	2.31	2.95	3.15	8.94	3.70	1.85	2.02	1.52	1.09	.98	3.02

CAL YR 1988 TOTAL 21936.00 MEAN 59.9 MAX 1990 MIN .00 CFSM 1.01 IN. 13.69
WTR YR 1989 TOTAL 50667.08 MEAN 139 MAX 3750 MIN .08 CFSM 2.33 IN. 31.62

03217000 TYGARTS CREEK NEAR GREENUP, KY

LOCATION.--Lat 38°33'51", long 82°57'08", Greenup County, Hydrologic Unit 05090103, on downstream side of center pier of bridge on State Highway 7, 100 ft downstream from Lick Run, 0.4 mi upstream from White Oak Creek, 6.5 mi west of Greenup, and at mile 28.1.

DRAINAGE AREA.--242 mi^2.

PERIOD OF RECORD.--August 1940 to current year.

REVISED RECORDS.--WSP 1113: 1942-43, 1945-46. WSP 1625: 1958. WSP 1725: Drainage area. WRD KY 79-1: 1948(P), 1950(M), 1952(M), 1962(M), 1967(P), 1970(M), 1972-76(M), 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 547.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation at low flow caused by withdrawal of water for cooling purposes by gas transmission plant above station. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 305 ft^3/s, 17.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,400 ft^3/s, Dec. 9, 1979, gage height, 22.75 ft, from rating curve extended above 8,700 ft^3/s, on basis of contracted-opening measurement of peak flow; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	1400	4,970	15.79	Feb. 22	0500	5,420	16.32
Dec. 25	1400	5,150	16.05	Mar. 6	1800	6,050	16.88
Jan. 15	1300	4,320	14.85	Mar. 21	2400	3,800	13.76
Feb. 16	0800	*17,400	*20.99				

Minimum daily discharge, 0.36 ft^3/s, Oct. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	6.9	92	281	164	249	1220	593	84	53	42	39
2	4.1	6.3	79	280	148	212	679	646	67	44	48	41
3	3.4	5.4	65	249	1630	192	554	534	56	102	37	45
4	2.9	4.4	57	218	2640	179	670	412	52	98	30	38
5	2.4	4.7	52	188	946	1560	2040	595	55	108	26	30
6	2.1	6.5	48	244	544	5440	1150	796	243	84	27	25
7	1.8	31	45	510	398	3780	706	657	233	325	26	20
8	1.6	57	42	1260	313	1030	602	499	130	172	23	17
9	1.4	42	40	1520	278	626	1330	514	101	85	26	15
10	1.2	38	38	568	276	472	901	2220	218	56	24	12
11	.86	35	36	382	248	402	600	1030	174	45	18	12
12	.76	33	35	1900	207	338	469	626	110	37	14	14
13	.83	38	33	1960	375	286	390	469	136	33	12	31
14	.87	41	31	1230	5450	261	326	374	276	122	10	27
15	.91	36	28	4010	9570	244	297	496	250	97	9.2	24
16	.88	32	28	1640	14200	213	299	719	659	51	8.3	66
17	.73	30	29	665	4080	186	275	480	494	38	7.9	430
18	.94	27	29	459	1150	176	246	369	306	31	9.4	233
19	1.5	37	29	352	687	203	790	295	216	903	9.6	124
20	.93	2150	27	282	512	259	698	274	294	2740	13	76
21	.36	4350	33	235	3260	2910	461	293	377	546	21	54
22	.78	656	804	199	4300	2410	368	238	459	257	839	48
23	2.3	309	662	175	1160	825	308	320	504	165	283	1300
24	3.9	213	2440	159	630	563	266	452	325	111	177	1960
25	24	161	4590	144	461	449	237	335	209	77	246	475
26	27	124	947	132	401	380	231	266	149	57	116	277
27	27	103	445	127	362	316	359	256	109	48	78	198
28	25	95	387	126	304	277	553	210	93	100	53	143
29	16	98	703	115	---	252	630	160	86	87	47	105
30	12	103	477	114	---	365	642	127	71	68	42	85
31	8.9	---	335	136	---	1330	---	103	---	47	39	---
TOTAL	182.55	8873.2	12686	19860	54694	26385	18297	15358	6536	6787	2361.4	5964
MEAN	5.89	296	409	641	1953	851	610	495	218	219	76.2	199
MAX	27	4350	4590	4010	14200	5440	2040	2220	659	2740	839	1960
MIN	.36	4.4	27	114	148	176	231	103	52	31	7.9	12
CFSM	.02	1.22	1.69	2.65	8.07	3.52	2.52	2.05	.90	.90	.31	.82
IN.	.03	1.36	1.95	3.05	8.41	4.06	2.81	2.36	1.00	1.04	.36	.92

CAL YR 1988 TOTAL 76773.38 MEAN 210 MAX 4590 MIN .36 CFSM .87 IN. 11.80
WTR YR 1989 TOTAL 177984.15 MEAN 488 MAX 14200 MIN .36 CFSM 2.01 IN. 27.36

CABIN CREEK BASIN

03237900 CABIN CREEK NEAR TOLLESBORO, KY

LOCATION.--Lat 38°34'04", long 83°32'14", Lewis County, Hydrologic Unit 05090201, on left bank 20 ft upstream of bridge on State Highway 10, 0.1 mi downstream from Bethel Creek, 2.0 mi east of Tollesboro, 2.2 mi upstream from Indian Creek, and at mile 11.3.

DRAINAGE AREA.--22.4 mi^2.

PERIOD OF RECORD.--April 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 615.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 14 to Apr. 19. Records good except those for estimated daily discharge which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--17 years, 30.3 ft^3/s, 18.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,370 ft^3/s, Apr. 22, 1972, gage height, 14.42 ft, from rating curve extended above 797 ft^3/s on basis of contracted-opening measurement of peak flow; no flow on many days.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*).

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	0630	*4,520	10.88	July 11	2200	3,870	10.43
Jun. 15	0545	4,330	*10.92				

No flow many days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.06	2.0	49	11	14	170	47	5.0	139	4.9	1.3
2	.00	.08	1.7	20	11	13	56	31	4.4	53	2.8	2.9
3	.00	.20	1.6	14	577	13	85	19	4.2	79	2.2	1.4
4	.00	.26	1.5	10	105	13	150	15	6.4	72	1.7	.73
5	.00	11	1.3	11	49	555	85	62	112	20	1.9	.42
6	.00	4.6	1.3	112	32	462	43	28	25	13	36	.30
7	.00	2.6	1.2	35	22	90	62	20	9.0	8.4	4.3	.23
8	.00	1.8	1.1	305	16	48	100	16	5.9	5.7	2.4	.20
9	.00	1.0	.91	35	7.6	32	60	171	38	4.3	1.7	.17
10	.00	14	.79	18	7.6	26	37	76	11	3.6	1.2	.13
11	.00	3.6	.70	21	8.2	23	31	33	5.6	453	.88	.12
12	.00	1.6	.43	327	6.0	20	26	23	16	188	.61	.14
13	.00	3.0	.43	61	171	18	22	19	53	105	.52	.14
14	.00	2.1	.60	512	968	15	19	16	14	30	.42	.12
15	.00	1.2	.79	172	1610	13	16	336	859	9.6	.34	2.0
16	.00	.77	.72	53	453	12	13	105	123	5.8	.30	7.4
17	.00	.49	.61	29	80	10	11	40	55	3.9	.27	5.6
18	.45	.34	.44	21	45	23	50	25	24	2.9	.30	1.3
19	.13	81	.43	17	28	90	86	21	18	73	.33	.55
20	.06	507	.54	15	68	390	22	24	105	36	12	.33
21	.84	19	47	12	814	150	14	18	95	11	11	.24
22	.56	7.8	11	12	91	55	11	15	26	5.8	4.6	67
23	.56	5.2	106	11	45	43	9.8	110	15	66	1.9	326
24	1.4	3.5	477	10	29	34	8.6	39	10	16	24	20
25	.31	2.9	47	10	24	26	7.7	20	7.0	5.3	8.8	3.8
26	.19	2.4	16	14	26	20	7.8	58	5.4	3.3	3.1	1.7
27	.14	4.4	12	17	22	16	53	20	4.5	37	3.5	.69
28	.12	4.6	157	13	17	13	16	12	4.1	73	1.9	.36
29	.09	3.2	34	12	---	35	60	9.3	3.3	8.8	1.3	.27
30	.08	2.5	17	12	---	110	65	7.7	2.6	5.9	9.3	.23
31	.06	---	12	12	---	370	---	6.1	---	5.5	2.4	---
TOTAL	4.99	692.20	955.09	1972	5343.4	2752	1396.9	1442.1	1666.4	1542.8	146.87	445.77
MEAN	.16	23.1	30.8	63.6	191	88.8	46.6	46.5	55.5	49.8	4.74	14.9
MAX	1.4	507	477	512	1610	555	170	336	859	453	36	326
MIN	.00	.06	.43	10	6.0	10	7.7	6.1	2.6	2.9	.27	.12
CFSM	.01	1.03	1.38	2.84	8.52	3.96	2.08	2.08	2.48	2.22	.21	.66
IN.	.01	1.15	1.59	3.27	8.87	4.57	2.32	2.39	2.77	2.56	.24	.74

CAL YR 1988 TOTAL 7980.15 MEAN 21.8 MAX 1340 MIN .00 CFSM .97 IN. 13.25
WTR YR 1989 TOTAL 18360.52 MEAN 50.3 MAX 1610 MIN .00 CFSM 2.25 IN. 30.49

03248500 LICKING RIVER NEAR SALYERSVILLE, KY

LOCATION.--Lat 37°45'03", long 83°05'04", Magoffin County, Hydrologic Unit 05100101, on left bank on downstream side of bridge on State Highway 30, 0.8 mi upstream from Gardner Branch, 1.2 mi west of Salyersville, 2.9 mi downstream from State Road Fork, and at mile 266.9.

DRAINAGE AREA.--140 mi^2.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October to December 1938, publishedin WSP 1305.

REVISED RECORDS.--WSP 923: 1939-40, drainage area. WSP 1505: 1955(M), 1956(P).

GAGE.--Water-stage recorder. Datum of gage is 823.80 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 27, 1939, nonrecording gage at same site and datum. Feb. 27, 1939 to Sept. 27, 1965, water-stage recorder on upstream side of bridge at same datum.

REMARKS.--Estimated daily discharges: Dec. 10-20, Apr. 14, 16-[illegible], 19-26, Aug. 9 to Sept. 1. Records fair except those for estimated daily discharge which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality section.

AVERAGE DISCHARGE.--51 years, 172 ft^3/s, 16.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft^3/s, Feb. 3, 1939, gage height, 25.4 ft, from floodmark; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	2200	2,460	18.92	Mar. 6	1630	3,120	19.59
Feb. 16	0630	2,300	18.74	June 17	0030	*3,900	*20.24
Feb. 21	1930	2,730	19.21				

Minimum daily, 5.5 ft^3/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUFS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	9.2	93	173	89	199	261	204	72	83	51	16
2	15	8.8	76	149	83	171	226	409	90	254	38	50
3	13	8.3	66	126	1090	157	394	298	220	223	32	30
4	12	8.0	60	108	1670	145	645	228	88	165	26	19
5	11	53	52	92	584	564	567	264	58	134	27	15
6	9.3	171	48	156	377	2540	389	671	132	106	47	13
7	8.6	97	45	212	282	2390	322	539	124	93	36	16
8	6.8	59	41	254	227	794	309	408	102	82	28	14
9	6.9	37	38	261	173	460	341	628	98	76	25	13
10	6.6	52	36	211	142	357	283	1700	137	71	22	13
11	6.3	83	34	175	135	302	247	935	92	64	20	15
12	6.1	53	34	556	122	263	217	493	70	55	18	16
13	5.9	39	33	966	284	248	181	360	180	48	16	15
14	5.6	32	30	566	1270	319	159	300	201	45	14	14
15	5.5	27	29	699	1770	281	204	291	648	40	13	131
16	5.8	25	28	524	2180	239	193	291	2670	36	12	723
17	5.6	72	27	356	1460	210	170	232	2700	34	40	213
18	6.0	76	26	277	683	196	145	186	804	31	140	87
19	6.2	142	25	225	474	181	170	153	426	34	90	71
20	6.2	1300	24	178	382	177	180	149	350	76	50	56
21	8.3	1040	117	143	2020	1170	160	144	277	63	84	44
22	15	283	344	118	2080	1120	135	114	383	39	150	115
23	16	168	215	106	760	524	115	394	796	31	260	591
24	29	120	715	96	456	444	98	350	279	28	420	356
25	25	92	1540	87	356	361	92	239	180	27	270	161
26	19	75	477	82	319	304	84	178	129	25	150	141
27	14	82	280	80	279	263	78	274	101	25	100	138
28	12	193	272	72	240	229	99	182	162	39	60	93
29	12	160	319	68	---	203	249	136	120	41	29	80
30	11	118	244	89	---	202	218	111	84	59	23	75
31	9.7	---	192	107	---	268	---	86	---	60	19	---
TOTAL	336.4	4683.3	5560	7312	19987	15281	6931	10947	11773	2187	2310	3334
MEAN	10.9	156	179	236	714	493	231	353	392	70.5	74.5	111
MAX	29	1300	1540	966	2180	2540	645	1700	2700	254	420	723
MIN	5.5	8.0	24	68	83	145	78	86	58	25	12	13
CFSM	.08	1.12	1.28	1.68	5.10	3.52	1.65	2.52	2.80	.50	.53	.79
IN.	.09	1.24	1.48	1.94	5.31	4.06	1.84	2.91	3.13	.58	.61	.89

CAL YR 1988 TOTAL 31974.9 MEAN 87.4 MAX 1540 MIN 1.0 CFSM .62 IN. 8.50
WTR YR 1989 TOTAL 90641.7 MEAN 248 MAX 2700 MIN 5.5 CFSM 1.77 IN. 24.08

03249500 LICKING RIVER AT FARMERS, KY

LOCATION.--Lat 38°06'55", long 83°32'36", Bath County, Hydrologic Unit 05100101, on left bank 0.2 mi downstream from Hog Hollow, 0.6 mi downstream from Cave Run Dam, 1.9 mi south of Farmers, 4.5 mi upstream from Triplett Creek, and at mile 174.

DRAINAGE AREA.--827 mi^3, revised.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1915 to June 1920 (gage heights only), May 1928 to September 1931, December 1936 to February 1937 (in WSP 838), April 1938 to current year. All figures of discharge above 2,000 ft^3/s prior to April 1938 are unreliable and should not be used. Gage-height records collected at former site since 1915 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1275: 1928-31, 1937. WSP 1505: 1950(P). WSP 1705: 1952, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 644.55 ft above National Geodetic Vertical Datum of 1929. July 22, 1915 to June 30, 1920, nonrecording gage at site 400 ft downstream from present auxiliary gage, at datum 0.21 ft lower. May 22, 1928 to Sept. 1, 1939, nonrecording gage and Sept. 2, 1939 to July 13, 1942, water-stage recorder at site 100 ft downstream from present auxiliary gage at present datum. July 14, 1942 to Oct. 20, 1965, water-stage recorder at site and datum of present auxiliary gage. Auxiliary gages: Water-stage recorder on U.S. Highway 60 bridge, 3.4 mi downstream at same datum. July 2, 1938 to Sept. 30, 1944, nonrecording gage at site 4.4 mi downstream. Oct. 1, 1944 to Oct. 11, 1960, nonrecording gage 0.35 mi upstream and Oct. 12, 1960 to Oct. 20, 1965, nonrecording gage 0.65 mi upstream at datum 5.90 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Cave Run Dam beginning December 1973 (station 03249498). High flow only regulated prior to December 1973 (Cave Run Dam under construction). Diversion above station from Cave Run Lake for Fish Hatchery; return flow of which enters Licking River below station.

AVERAGE DISCHARGE.--51 years (Water years 1939-89), 1,046 ft^3/s, 17.18 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,000 ft^3/s, Feb. 28, 1962; maximum gage height, 31.1 ft, Feb. 9, 1918 (ice jam), site and datum then in use; reverse flow at times, caused by backwater; minimum discharge unaffected by backwater, 0.7 ft^3/s, Oct. 14, 1930; minimum gage height, 1.30 ft, Sept. 19, 1943, site then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,630 ft^3/s, Mar. 10; gage height, 23.30 ft, Feb. 15; minimum daily discharge, 79 ft^3/s, Aug. 16-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	235	252	3860	3870	495	4510	3440	3080	583	243	665	236
2	239	252	3830	3850	496	4170	3350	3080	439	249	1490	237
3	348	250	3810	3820	414	3600	3040	2870	243	423	1730	238
4	600	249	3780	3790	284	2390	3200	2390	245	719	1720	236
5	707	253	3380	3760	1150	1580	4170	1930	248	718	1190	234
6	704	251	2710	3300	2990	582	3970	1670	253	717	712	233
7	511	250	2180	2440	3900	797	4030	1670	253	713	711	204
8	399	486	1510	1060	3890	2810	4350	1670	252	713	392	231
9	402	680	577	1090	3870	4410	4440	1510	508	716	238	235
10	406	690	215	2420	3850	4620	4400	1090	732	555	208	238
11	308	680	216	2650	3830	4600	4340	2240	731	136	127	240
12	247	675	215	1370	3810	4570	4300	2870	732	126	127	239
13	246	674	216	1980	2550	4560	4260	3120	747	137	127	212
14	245	670	216	2580	418	4550	4240	3120	661	133	127	239
15	244	666	217	1170	521	4530	4230	3360	1600	132	104	238
16	245	664	216	1090	428	4500	4210	3600	3000	134	79	243
17	246	665	217	2030	263	4480	4190	3580	3190	135	79	244
18	251	662	216	3350	88	4470	4180	3560	3170	115	170	710
19	218	613	216	3760	1350	4480	4170	3540	3390	107	238	2030
20	250	608	216	3740	2080	3890	4170	3050	3620	1050	239	3150
21	249	346	235	3120	524	1400	3790	2270	3280	2320	241	3130
22	250	1830	221	2170	193	2570	2840	1690	2490	1330	239	2070
23	250	3670	723	1990	1180	4500	2210	1840	2240	520	237	246
24	251	4060	1200	1490	3240	4480	2200	2410	2220	404	238	241
25	250	4020	1000	1060	4040	4440	2760	2630	1660	318	236	1370
26	250	3710	1010	1060	4030	4410	3090	2640	702	246	236	2770
27	250	3030	2100	1060	4010	4390	3090	2640	246	242	237	3130
28	250	3560	2110	769	4270	4370	3080	2510	248	242	237	3120
29	251	3910	2790	495	---	3700	3080	1770	244	241	237	3100
30	251	3880	3640	496	---	2360	3100	1000	242	248	238	3090
31	251	---	3890	495	---	3040	---	583	---	251	238	---
TOTAL	9804	42206	46932	67325	58164	113759	109920	74983	38169	14333	13087	32134
MEAN	316	1407	1514	2172	2077	3670	3664	2419	1272	462	422	1071
MAX	707	4060	3890	3870	4270	4620	4440	3600	3620	2320	1730	3150
MIN	218	249	215	495	88	582	2200	583	242	107	79	204

CAL YR 1988 TOTAL 251223 MEAN 686 MAX 4060 MIN 28
WTR YR 1989 TOTAL 620816 MEAN 1701 MAX 4620 MIN 79

03249500 LICKING RIVER AT FARMERS, KY--Continued

WATER-QUALITY RECORDS

LOCATION.--Temperature recorder 3.4 mi downstream from base gaging station and at auxiliary gage station.

PERIOD OF RECORD.--Water years 1949 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1949 to current year.
SUSPENDED SEDIMENT DISCHARGE: November 1960 to September 1967.

INSTRUMENTATION.--Temperature recorder since October 1953.

REMARKS.--Specific conductance measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section. Miscellaneous temperature measurements may differ slightly from recorded values due to differences in sampling locations.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (Water years 1949-60, 1963-79, 1981 to current year): Maximum, 33.5°C, July 19, 1951; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 24.5°C, Aug. 29-31; minimum, 4.5°C, Jan. 15-Feb. 1.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.4	23.0	13.9	13.1	11.3	11.3	6.1	6.1	5.0	4.5	7.6	7.5
2	23.4	23.4	13.9	13.1	11.3	10.8	6.1	6.0	5.0	5.0	7.8	7.6
3	23.4	21.4	13.1	12.3	10.8	10.5	6.0	5.6	6.2	5.9	7.9	7.5
4	21.4	18.3	14.5	13.0	10.5	10.4	5.6	5.2	5.9	5.5	8.5	7.9
5	18.3	17.2	15.1	14.5	10.4	10.0	5.2	5.1	5.5	5.1	9.3	8.5
6	16.8	16.1	14.8	12.9	10.0	9.7	5.1	5.1	5.5	5.5	9.4	9.0
7	16.4	15.7	12.9	12.5	9.9	9.6	5.1	5.1	5.5	5.1	9.1	8.8
8	16.[illegible]	15.4	13.9	12.8	9.9	9.6	5.9	5.1	5.3	5.2	9.0	8.5
9	16.1	15.4	13.9	13.5	9.6	8.9	5.4	5.0	5.3	5.0	9.2	9.0
10	16.1	15.7	14.6	13.8	8.9	7.7	5.0	5.0	5.3	4.8	9.3	9.2
11	16.4	16.1	14.6	13.7	8.1	7.4	5.0	5.0	5.0	4.9	9.8	9.3
12	16.4	16.1	13.7	13.4	7.4	6.7	5.0	5.0	5.2	5.1	10.3	9.8
13	16.1	15.4	14.0	13.6	7.0	6.7	5.0	5.0	5.3	5.2	10.4	9.9
14	15.7	15.0	14.0	13.3	8.0	6.9	5.0	5.0	5.5	5.3	10.9	10.3
15	16.4	15.7	13.6	13.2	8.0	7.6	5.0	4.5	6.7	5.5	10.9	10.5
16	16.8	16.4	14.3	13.5	7.6	6.6	4.5	4.5	7.2	6.7	10.7	10.4
17	17.9	16.8	13.8	13.4	6.9	6.5	4.5	4.5	7.0	6.6	10.7	10.5
18	18.7	17.9	13.1	12.7	6.1	5.7	4.5	4.5	6.7	6.0	10.9	10.4
19	18.7	17.6	13.0	12.2	6.8	6.1	4.5	4.5	6.8	6.1	10.7	10.3
20	17.6	16.4	13.0	12.2	7.4	6.7	4.5	4.5	6.7	6.6	10.7	10.2
21	16.8	16.4	12.9	12.5	7.4	7.4	4.5	4.5	8.0	6.7	10.5	10.0
22	16.8	16.1	12.9	11.4	7.4	7.1	4.5	4.5	8.1	7.7	10.0	9.6
23	16.1	15.4	12.8	12.8	7.4	7.0	4.5	4.5	7.7	6.7	10.2	9.8
24	15.7	15.4	12.8	12.7	8.0	7.0	4.5	4.5	7.3	6.8	10.1	10.0
25	15.4	15.0	11.5	11.5	8.4	8.0	4.5	4.5	7.0	6.9	10.2	9.9
26	15.4	14.5	11.5	11.5	7.7	6.3	4.5	4.5	7.2	7.1	10.2	9.8
27	14.2	13.4	12.6	12.2	6.9	6.5	4.5	4.5	7.3	7.2	10.0	9.9
28	14.8	13.8	12.2	11.7	6.9	6.5	4.5	4.5	7.5	7.3	10.2	9.8
29	14.8	13.7	11.7	11.7	6.9	6.5	4.5	4.5	---	---	10.2	9.7
30	13.7	12.9	11.7	11.3	6.5	6.4	4.5	4.5	---	---	9.7	9.5
31	13.2	12.9	---	---	6.4	6.1	4.5	4.5	---	---	9.5	9.1
MONTH	23.4	12.9	15.1	11.3	11.3	5.7	6.1	4.5	8.1	4.5	10.9	7.5

LICKING RIVER BASIN

03249500 LICKING RIVER AT FARMERS, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.7	9.0	10.5	10.1	13.3	12.6	20.8	19.6	23.7	18.9	22.9	22.1
2	9.9	9.5	10.5	10.1	13.6	12.5	20.8	20.0	18.9	18.0	22.5	22.1
3	10.5	9.8	10.5	10.1	16.2	13.9	21.2	17.6	18.4	18.0	22.5	21.7
4	10.1	10.0	10.8	10.1	16.2	15.4	17.2	16.3	18.4	17.9	22.1	21.3
5	10.0	9.5	11.2	10.5	16.9	15.8	16.3	16.0	19.1	17.9	22.5	21.7
6	9.8	9.3	10.5	10.1	16.9	15.8	16.0	15.6	19.5	18.7	22.5	21.7
7	10.0	9.2	10.1	10.1	16.5	15.8	16.3	15.6	19.1	18.6	22.5	22.1
8	10.2	9.1	10.5	10.5	16.8	16.1	16.3	15.6	21.4	18.2	22.5	22.1
9	9.7	9.6	10.6	10.1	16.8	15.0	16.3	15.6	23.3	21.4	22.5	21.7
10	9.6	9.2	10.2	10.2	15.0	14.6	16.6	15.9	23.7	22.5	22.5	22.1
11	9.4	9.1	10.9	10.2	14.6	14.2	19.0	16.6	23.7	22.5	22.5	22.1
12	9.7	9.0	11.3	10.6	15.0	14.2	21.0	19.4	23.2	22.4	22.2	21.8
13	9.6	9.1	11.7	11.3	14.9	14.5	21.0	21.0	23.2	22.8	22.2	21.8
14	9.4	9.0	12.0	11.7	14.9	14.5	21.0	20.2	23.6	22.7	22.2	22.2
15	10.0	9.5	12.4	12.0	14.9	13.7	21.0	20.1	23.9	23.1	22.2	21.8
16	9.5	9.2	12.4	12.0	14.1	13.7	20.9	20.5	23.5	23.0	21.8	21.4
17	9.7	9.3	12.9	12.4	14.5	14.1	20.9	20.1	23.0	22.6	21.8	21.4
18	9.6	9.2	12.9	12.5	14.5	14.1	20.9	20.1	23.4	22.6	21.4	18.2
19	9.2	9.2	12.9	12.9	14.8	14.4	20.9	20.7	23.7	22.9	19.0	17.8
20	9.9	9.2	13.2	12.9	15.1	14.8	21.0	17.1	24.1	23.3	19.8	19.0
21	9.9	9.2	12.9	12.5	15.1	15.1	17.3	16.8	24.1	23.6	20.2	19.8
22	9.7	9.0	12.5	12.5	14.8	14.8	17.1	16.1	24.4	22.9	20.2	19.8
23	9.7	9.0	12.5	12.5	14.8	14.4	16.7	15.7	24.4	24.0	21.8	19.8
24	9.7	9.3	13.2	12.5	15.0	14.7	18.4	17.1	24.0	24.0	21.4	20.3
25	10.0	9.0	13.6	12.9	14.7	14.3	20.3	17.7	24.4	24.0	20.7	19.9
26	9.7	9.3	13.3	12.9	16.5	13.9	22.5	20.3	24.4	24.0	20.7	19.9
27	10.0	10.0	13.7	13.3	19.7	16.9	23.9	22.9	24.4	24.0	20.7	20.3
28	10.0	9.7	13.3	13.3	20.5	19.3	24.2	23.1	24.4	24.0	21.1	20.7
29	10.0	9.7	13.3	13.0	20.4	19.6	24.2	23.0	24.5	24.1	21.1	21.1
30	10.0	9.7	13.3	12.6	20.8	19.6	24.2	23.4	24.5	24.1	21.1	21.1
31	---	---	13.3	12.6	---	---	23.8	23.7	24.5	22.5	---	---
MONTH	10.5	9.0	13.7	10.1	20.8	12.5	24.2	15.6	24.5	17.9	22.9	17.8
YEAR	24.5	4.5										

03250000 TRIPLETT CREEK AT MOREHEAD, KY

LOCATION.--Lat 38°11'04", long 83°25'48", Rowan County, Hydrologic Unit 05100101, in pumping plant on right bank at Morehead, 0.1 mi downstream from Evans Branch, 0.6 mi upstream from Oxley Branch, and at mile 13.8.

DRAINAGE AREA.--47.5 mi^2.

PERIOD OF RECORD.--June 1941 to September 1980, October 1988 to September 1989.

REVISED RECORDS.--WSP 1625: 1941, 1942-43(P), 1945(P), 1947(M), 1948, 1949(P), 1950, 1951(P), 1952, 1953(M), 1955-57, 1958(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 708.26 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1970, water-stage recorder at site 0.4 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 26 to Nov. 2, July 2-17, Aug. 2 to Sept. 21, 24-30. Records good except for estimated daily discharges, which are fair. Some regulation above station by reservoir on Evans Branch, approximate capacity, 185 ft^3/s days, and by pumpage at station to supply Morehead State College and city of Morehead. Sewage returns to stream below station. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--40 years (Water years 1942-80, 1989), 74.3 ft^3/s, 21.24 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,600 ft^3/s, July 3, 1960, (gage height, 14.83 ft, site and datum then in use), from rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 5, 1939, reached a stage of 18.9, from floodmarks, discharge, 44,000 ft^3/s on basis of slope-conveyance studies.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0730	5,270	15.24	Feb. 15	0800	*9,100	*16.41
Dec. 24	1200	5,330	15.29	Feb. 21	0400	4,370	14.92
Feb. 13	1900	3,140	14.39	Mar. 5	1200	3,310	14.47

No flow Oct. 14-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	3.6	21	66	32	41	243	92	5.4	126	13	6.6
2	3.8	3.2	17	57	29	31	144	117	4.2	58	9.0	7.0
3	3.0	7.0	13	45	601	28	146	82	4.0	80	7.0	5.0
4	2.5	11	12	31	368	25	573	65	5.5	100	6.0	4.0
5	2.4	23	12	24	156	1010	470	140	9.3	78	5.6	3.4
6	1.6	23	8.9	83	92	1140	219	196	19	62	8.4	2.9
7	1.4	20	7.6	106	66	387	147	129	8.6	45	6.4	2.5
8	1.3	20	7.1	784	57	179	158	95	6.1	30	4.2	2.2
9	1.3	15	6.1	230	42	114	219	653	34	15	3.2	1.9
10	1.2	31	5.5	104	39	84	136	508	19	9.0	2.6	2.1
11	.88	36	4.9	70	37	68	103	214	11	13	2.1	2.0
12	.52	22	4.7	429	30	57	79	127	7.0	20	1.7	1.7
13	.09	20	4.9	291	577	48	64	85	59	40	1.4	3.0
14	.00	16	4.9	428	1460	47	51	65	48	25	1.2	12
15	.00	12	4.9	573	3220	52	60	94	151	10	1.1	66
16	.00	13	4.7	236	1030	41	55	85	190	6.4	1.0	50
17	.00	14	4.9	136	385	32	43	65	88	4.5	.92	32
18	.00	12	4.9	91	185	52	43	48	48	3.6	1.0	20
19	.00	637	4.9	68	116	72	71	35	73	230	.90	13
20	.00	1630	4.9	51	96	162	63	45	88	232	10	8.2
21	2.2	249	491	34	1550	992	56	37	144	80	340	30
22	10	94	256	27	430	319	44	27	263	40	120	102
23	13	55	485	22	194	164	38	65	204	22	74	530
24	23	33	1380	19	121	107	30	75	82	13	45	270
25	18	23	389	17	92	78	27	50	48	8.4	30	150
26	10	19	131	18	79	63	26	39	28	5.9	18	80
27	8.0	22	77	18	66	50	27	28	20	4.6	11	42
28	6.4	31	162	15	53	41	27	19	29	17	7.0	25
29	5.6	28	150	12	---	39	68	15	15	5.2	7.6	13
30	4.9	22	91	24	---	74	83	11	9.9	31	7.0	8.6
31	4.0	---	63	33	---	414	---	7.5	---	32	6.0	---
TOTAL	129.39	3144.8	3833.8	4142	11203	6011	3513	3313.5	1721.0	1446.6	752.32	1496.1
MEAN	4.17	105	124	134	400	194	117	107	57.4	46.7	24.3	49.9
MAX	23	1630	1380	784	3220	1140	573	653	263	232	340	530
MIN	.00	3.2	4.7	12	29	25	26	7.5	4.0	3.6	.90	1.7

WTR YR 1989 TOTAL 40706.51 MEAN 112 MAX 3220 MIN .00

03250100 NORTH FORK TRIPLETT CREEK NEAR MOREHEAD, KY

LOCATION.--Lat 38°11'57", long 83°28'50", Rowan County, Hydrologic Unit 05100101, on right downstream wingwall of bridge on State Highway 32, 0.5 mi upstream from Pence Branch, 1.8 mi downstream from Big Brushy Creek, 2.8 mi northwest of Morehead, and at mile 6.1.

DRAINAGE AREA.--84.7 mi^2.

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 678.03 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 20 to Dec. 6, Dec. 24 to Jan. 9. Records good except for estimated daily discharges, which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--22 years, 130 ft^3/s, 20.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/s, Feb. 15, 1989, gage height, 20.62 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0900	7,170	17.20	Feb. 21	0730	5,860	15.72
Dec. 24	1430	6,790	16.78	Mar. 5	1430	5,800	15.65
Jan. 14	2300	4,630	14.19	Mar. 21	0430	4,080	13.46
Feb. 15	1100	*10,600	*20.62				

Minimum daily discharge, 0.80 ft^3/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	7.7	43	142	116	83	454	265	22	27	83	11
2	1.9	6.2	37	135	102	74	273	312	17	181	45	12
3	1.8	6.3	32	118	1450	70	263	194	14	71	25	12
4	1.6	5.7	27	100	640	65	623	138	12	155	17	8.7
5	9.4	31	25	92	312	2310	561	295	30	162	13	6.6
6	3.5	91	21	170	198	2440	301	310	228	105	19	5.3
7	1.9	87	17	350	213	514	216	230	107	103	26	4.4
8	1.4	74	16	990	273	267	259	164	72	59	14	3.5
9	1.2	57	15	520	347	170	454	787	147	31	11	2.9
10	1.1	72	13	211	443	131	263	717	188	20	7.7	2.7
11	.95	81	12	152	522	110	172	341	116	15	5.7	4.7
12	.86	65	10	1050	634	93	131	217	78	41	4.2	3.9
13	.83	63	9.5	570	2200	83	105	155	237	79	3.2	2.6
14	.83	59	10	1080	8630	84	87	117	310	47	2.6	3.1
15	.80	47	11	1320	7800	79	95	169	357	23	2.3	26
16	.83	39	10	366	2340	65	88	253	481	15	2.1	113
17	.92	33	9.5	224	540	56	77	174	301	11	1.9	79
18	1.1	25	8.7	162	308	80	73	125	167	8.5	2.6	33
19	1.1	459	8.2	126	203	117	214	99	124	379	2.3	20
20	1.2	3900	8.4	104	169	278	198	114	279	484	2.0	14
21	2.1	1900	409	85	3070	2090	142	121	313	228	436	11
22	6.3	500	313	71	653	425	111	90	191	138	246	329
23	7.3	200	738	67	308	241	92	102	184	86	92	1610
24	25	92	2900	61	183	159	79	114	111	114	77	428
25	28	56	1500	54	143	123	70	95	76	72	77	195
26	23	37	600	55	140	100	65	86	53	43	38	124
27	16	54	200	70	121	84	72	98	106	28	24	83
28	12	76	240	66	102	72	80	75	80	83	17	56
29	11	58	290	64	---	74	178	61	35	50	13	38
30	10	45	220	98	---	161	276	44	21	186	13	30
31	8.8	---	140	125	---	765	---	30	---	153	14	---
TOTAL	184.92	8226.9	7893.3	8798	32160	11463	6072	6092	4457	3197.5	1336.6	3272.4
MEAN	5.97	274	255	284	1149	370	202	197	149	103	43.1	109
MAX	28	3900	2900	1320	8630	2440	623	787	481	484	436	1610
MIN	.80	5.7	8.2	54	102	56	65	30	12	8.5	1.9	2.6
CFSM	.07	3.24	3.01	3.35	13.6	4.37	2.39	2.32	1.75	1.22	.51	1.29
IN.	.08	3.61	3.47	3.86	14.12	5.03	2.67	2.68	1.96	1.40	.59	1.44

CAL YR 1988 TOTAL 39336.11 MEAN 107 MAX 3900 MIN .00 CFSM 1.27 IN. 17.28
WTR YR 1989 TOTAL 93153.62 MEAN 255 MAX 8630 MIN .80 CFSM 3.01 IN. 40.91

03251000 NORTH FORK LICKING RIVER NEAR LEWISBURG, KY

LOCATION.--Lat 38°32'57", long 83°47'37", Mason County, Hydrologic Unit 05100101, on left bank at downstream side of bridge on State Highway 419, 1.2 mi west of Lewisburg, 1.3 mi downstream from Mill Creek, and at mile 50.1.

DRAINAGE AREA.--119 mi^2.

PERIOD OF RECORD.--August 1946 to current year.

REVISED RECORDS.--WSP 1173: 1947-48. WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 2, 1950, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 9-12, 23-26, July 15-19. Records fair except for estimated daily discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--43 years, 147 ft^3/s, 16.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s, Apr. 13, 1948, gage height, 20.7 ft, from floodmarks; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1938 reached a stage of 22.7 ft, discharge, 13,300 ft^3/s, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 20	1000	4,080	11.21	Feb. 15	1000	*7,580	*16.25
Dec. 24	0630	4,430	11.78	Feb. 21	0700	4,530	11.94
Jan. 14	2130	3,640	10.48				

No flow many days in October.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.14	24	184	50	89	710	226	33	70	70	1.7
2	.01	.17	20	151	45	75	318	220	26	228	34	2.4
3	.01	.17	17	115	1540	70	284	149	21	92	20	2.9
4	.00	.17	15	84	864	65	553	113	20	43	13	2.9
5	.00	.72	13	104	347	1010	734	235	139	22	9.3	3.9
6	.00	1.5	11	508	229	2250	325	204	135	15	9.3	1.6
7	.01	1.5	10	999	168	705	239	167	69	10	19	.86
8	.01	1.5	9.4	716	125	304	249	132	41	955	25	.62
9	.01	1.5	8.2	263	75	208	500	576	37	248	12	.55
10	.01	2.3	7.1	205	64	160	258	734	149	196	6.9	.50
11	.00	10	6.5	147	57	135	179	275	1150	84	4.0	.48
12	.00	15	5.9	1040	51	113	139	176	709	43	2.2	.41
13	.00	16	4.8	652	264	95	112	132	246	26	1.4	.39
14	.00	13	4.8	1280	3630	90	91	104	144	18	1.0	.36
15	.00	11	4.9	1570	5300	81	87	552	106	16	.67	.48
16	.00	10	4.3	446	3630	64	83	661	756	15	.62	.72
17	.00	10	3.7	242	767	54	66	243	515	14	.62	53
18	.00	9.1	3.1	170	350	53	65	154	209	13	.63	46
19	.00	95	2.8	131	233	123	455	115	126	34	.59	14
20	.00	2070	2.9	110	186	343	199	105	85	684	.54	6.0
21	.00	463	51	87	2650	1930	127	97	58	189	.75	2.2
22	.00	137	117	68	877	522	95	72	40	118	39	1.3
23	.01	83	451	64	244	251	79	875	28	61	43	630
24	.03	56	2130	58	203	177	63	296	21	61	17	474
25	.04	40	609	51	144	137	59	158	22	37	15	107
26	.05	31	230	51	134	111	52	173	21	22	17	49
27	.06	31	128	62	136	92	281	165	15	16	24	26
28	.06	39	636	63	111	74	160	95	11	284	11	15
29	.07	35	290	56	---	71	142	70	10	168	6.8	9.2
30	.08	31	166	55	---	509	465	56	72	68	4.1	6.3
31	.11	---	125	51	---	1540	---	43	---	93	2.1	---
TOTAL	0.58	3214.77	5111.4	9783	22474	11501	7169	7373	5014	3943	410.52	1459.77
MEAN	.019	107	165	316	803	371	239	238	167	127	13.2	48.7
MAX	.11	2070	2130	1570	5300	2250	734	875	1150	955	70	630
MIN	.00	.14	2.8	51	45	53	52	43	10	10	.54	.36
CFSM	.00	.90	1.39	2.65	6.74	3.12	2.01	2.00	1.40	1.07	.11	.41
IN.	.00	1.00	1.60	3.06	7.03	3.60	2.24	2.30	1.57	1.23	.13	.46

CAL YR 1988 TOTAL 35560.19 MEAN 97.2 MAX 3630 MIN .00 CFSM .82 IN. 11.12
WTR YR 1989 TOTAL 77454.05 MEAN 212 MAX 5300 MIN .00 CFSM 1.78 IN. 24.21

03251500 LICKING RIVER AT MCKINNEYSBURG, KY

LOCATION.--Lat 38°35'52", long 84°16'00", Pendleton County, Hydrologic Unit 05100101, on right bank at downstream side of highway bridge at McKinneysburg, 6.5 mi southeast of Falmouth, 9.0 mi upstream from Blanket Creek, 12.9 mi upstream from South Fork, and at mile 64.6.

DRAINAGE AREA.--2,326 mi^2.

PERIOD OF RECORD.--July 1924 to August 1926, October 1938 to current year. Monthly discharge only for October, November 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 520.83 ft above National Geodetic Vertical Datum of 1929. July 23, 1924 to Aug. 9, 1926, nonrecording gage at same site, datum unknown. Nov. 18, 1938 to June 30, 1939, nonrecording gage at present site and datum. Oct. 1, 1949 to Sept. 30, 1957, auxiliary water-stage recorder 4.0 mi downstream.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated since December 1973 by Cave Run Lake (station 03249498). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--52 years (Water years 1925, 1939-89), 2,984 ft^3/s, 17.42 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,100 ft^3/s, Mar. 10, 1964, gage height, 50.26 ft; minimum, 3.8 ft^3/s, Oct. 18, 19, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1937 reached a stage of 47.8 ft from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,300 ft^3/s, Feb. 16, gage height, 43.75 ft; minimum, 156 ft^3/s, Aug. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333	289	4890	5830	1440	5780	12000	5990	1530	573	1950	363
2	308	291	4790	5970	1500	5800	10500	5510	1100	495	1600	422
3	289	297	4690	5910	8420	5760	7990	5280	992	461	1200	372
4	273	297	4600	5610	13000	5480	8870	4900	925	614	1720	347
5	278	313	4520	5290	13000	7690	10300	4560	1180	655	1820	323
6	490	324	4430	5680	7410	19000	11400	4500	2360	1010	1780	304
7	753	406	3830	6940	5080	20400	9870	4250	2630	1120	1270	288
8	764	533	3100	10300	5940	17900	8310	3840	1570	1230	831	274
9	664	600	2460	11300	6090	11200	8980	5480	1080	1090	807	263
10	471	695	1670	9840	5830	7040	8910	9790	1750	949	618	242
11	442	1000	888	5540	5680	6820	8160	10900	3240	875	383	239
12	439	1220	455	8670	5580	6640	7210	8010	2050	786	321	248
13	426	1360	367	10300	6080	6350	6590	5400	1660	774	270	251
14	325	1100	372	10500	22100	6170	6180	4970	3470	765	191	265
15	269	1000	362	17200	33500	6120	5940	5630	6160	518	165	286
16	263	975	357	15400	43100	6030	5820	7680	8830	478	159	430
17	264	910	352	10600	42900	5850	5800	7100	7970	368	164	1290
18	280	846	343	5470	37000	5710	6090	5970	6560	289	1310	624
19	274	1220	336	5190	26800	5920	7180	5340	5180	271	1380	590
20	264	11900	327	5740	14400	7070	7040	5200	6830	1300	244	813
21	280	17400	367	5690	15700	15800	6500	5160	7920	3480	1500	2280
22	267	17700	947	5360	18200	15600	5980	4420	7380	4010	1790	3270
23	282	12900	3940	4280	17100	12300	5110	7930	5460	3160	1250	3900
24	293	5950	11200	3320	10900	8200	3900	6240	4220	1740	1290	4590
25	290	5150	15400	3060	5840	7180	3280	4610	3480	978	1090	4950
26	297	5150	14100	2330	6060	6660	3210	4410	2950	741	943	2360
27	318	5050	8140	2000	6260	6290	4140	4380	2050	615	1100	2300
28	332	4570	5940	1990	6050	6020	4560	4210	1230	474	615	3340
29	317	4190	7210	1970	---	5910	5310	3890	716	435	491	3530
30	305	4720	6910	1660	---	9160	5970	3300	712	706	469	3450
31	292	---	6030	1400	---	11600	---	2260	---	2880	392	---
TOTAL	11142	108356	123343	200340	390960	273450	211100	171110	103185	33840	29113	42204
MEAN	359	3612	3979	6463	13960	8821	7037	5520	3439	1092	939	1407
MAX	764	17700	15400	17200	43100	20400	12000	10900	8830	4010	1950	4950
MIN	263	289	327	1400	1440	5480	3210	2260	712	271	159	239

CAL YR 1988 TOTAL 736791 MEAN 2013 MAX 18900 MIN 60
WTR YR 1989 TOTAL 1698143 MEAN 4652 MAX 43100 MIN 159

03252000 STONER CREEK AT PARIS, KY

LOCATION.--Lat 38°13'45", long 84°15'22", Bourbon County, Hydrologic Unit 05100102, on left bank 25 ft upstream from bridge on county road, 0.5 mi north of Paris, 1.5 mi downstream from Houston Creek, and at mile 79.2.

DRAINAGE AREA.--239 mi^2.

PERIOD OF RECORD.--April 1953 to current year. Monthly discharge only for April 1953, published in WSP 1725.

REVISED RECORDS.--WSP 1385: 1954. WSP 1705: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 770.43 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Mar. 23-31, Apr. 12-26 and Sept. 22-30. Records good except for estimated daily discharges, which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--36 years, 287 ft^3/s, 16.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft^3/s, Dec. 9, 1978, gage-height, 20.55 ft; minimum daily, 0.2 ft^3/s, several days in 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since about 1928, about 19.5 ft, in winter of 1951, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1400	6,500	12.64	Feb. 21	1300	5,780	11.76
Dec. 24	1900	4,970	10.84	Mar. 6	0700	8,170	14.30
Jan. 15	0300	5,440	11.38	Mar. 21	1700	4,600	10.35
Feb. 3	2400	4,200	9.83	June 15	2000	4,760	10.46
Feb. 16	0400	*15,000	*18.65				

Minimum daily discharge, 0.96 ft^3/s, Oct. 13, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	5.5	133	360	113	263	1700	90	136	64	25	51
2	12	5.5	114	334	104	235	880	85	109	54	28	44
3	9.7	5.0	93	298	1790	221	700	80	91	49	25	40
4	7.1	8.0	81	255	2880	212	1100	77	129	42	20	37
5	3.5	23	71	210	1140	2410	2060	85	181	42	13	27
6	2.7	29	61	248	667	6890	1090	109	1210	44	14	22
7	2.4	42	56	534	448	2210	883	119	476	48	11	23
8	1.8	39	52	2140	338	1040	755	101	242	38	8.2	31
9	1.3	29	48	1970	258	667	1010	471	226	29	10	28
10	1.3	39	42	770	208	488	801	2080	647	24	11	16
11	1.1	49	38	504	199	396	583	796	282	20	9.8	15
12	1.0	87	35	1210	172	328	510	428	187	18	6.7	11
13	.96	79	33	1590	853	284	400	302	562	17	6.3	11
14	.96	64	28	1580	10200	296	330	244	1340	15	5.4	15
15	1.4	61	29	4540	12500	265	290	333	2940	13	3.7	26
16	2.0	55	31	1610	12900	231	250	548	2900	12	3.4	255
17	5.2	45	30	850	3670	202	220	327	1200	9.5	21	466
18	7.8	38	28	557	1300	226	200	239	635	7.1	348	213
19	7.8	338	28	410	819	332	230	193	524	60	230	121
20	7.5	5260	27	326	590	367	190	248	1740	207	111	76
21	11	4130	65	263	4400	3600	168	378	821	330	114	57
22	11	723	245	220	3280	2010	147	255	463	183	143	50
23	8.8	369	1010	192	1180	990	132	2140	320	90	123	200
24	7.3	250	3140	168	723	700	118	1420	238	52	808	920
25	10	183	3190	152	541	550	115	661	184	35	906	680
26	7.4	172	997	139	456	400	93	543	145	28	820	500
27	12	190	561	142	382	320	110	651	119	23	321	370
28	14	274	556	135	319	280	102	430	109	18	178	200
29	13	223	979	122	---	220	103	295	95	15	116	120
30	9.7	161	608	118	---	180	100	224	82	20	87	81
31	6.8	---	419	118	---	1550	---	171	---	29	64	---
TOTAL	202.52	12986.0	12828	22065	62430	28363	15370	14123	18333	1635.6	4590.5	4706
MEAN	6.53	433	414	712	2230	915	512	456	611	52.8	148	157
MAX	14	5260	3190	4540	12900	6890	2060	2140	2940	330	906	920
MIN	.96	5.0	27	118	104	180	93	77	82	7.1	3.4	11
CFSM	.03	1.81	1.73	2.98	9.33	3.83	2.14	1.91	2.56	.22	.62	.66
IN.	.03	2.02	2.00	3.43	9.72	4.41	2.39	2.20	2.85	.25	.71	.73

CAL YR 1988 TOTAL 82818.02 MEAN 226 MAX 5260 MIN .96 CFSM .95 IN. 12.89
WTR YR 1989 TOTAL 197632.62 MEAN 541 MAX 12900 MIN .96 CFSM 2.27 IN. 30.76

03252500 SOUTH FORK LICKING RIVER AT CYNTHIANA, KY

LOCATION.--Lat 38°23'27", long 84°18'11", Harrison County, Hydrologic Unit 05100102, on left bank at downstream side of bridge on State Highway 356 and 36, at Cynthiana, 0.3 mi downstream from Grays Run, in pool formed by old mill dam 2.6 mi downstream, and at mile 49.1.

DRAINAGE AREA.--621 mi^2.

PERIOD OF RECORD.--April 1938 to current year. Gage-height records collected in this vicinity since 1917 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1113: 1943(M). WSP 1505: 1945. WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 688.52 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 28, 1952, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 26 to Feb. 2, 9-13. Records fair except those for estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality section.

AVERAGE DISCHARGE.--51 years, 752 ft^3/s, 16.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,300 ft^3/s, Apr. 13, 1948, gage height, 23.32 ft; minimum daily, 0.3 ft^3/s, Oct. 23-26, Nov. 10-18, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	2400	10,700	13.68	Feb. 21	2200	10,900	13.82
Jan. 15	1000	10,400	13.44	Mar. 6	1400	14,800	16.12
Feb. 16	0700	*28,300	*23.02				

Minimum daily discharge, 9.5 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	11	404	893	230	569	4420	322	342	190	65	124
2	51	12	362	852	220	486	2370	287	307	176	200	113
3	36	13	322	778	3500	437	1570	265	261	172	130	98
4	37	13	294	641	7020	407	1940	256	256	158	91	76
5	35	17	264	525	3270	1920	4070	254	466	131	70	58
6	29	38	242	544	1690	13600	2980	280	1170	141	60	43
7	19	59	230	1120	1170	9040	2170	295	1500	166	44	37
8	15	77	218	3010	922	3340	1920	288	653	178	35	27
9	14	503	207	5100	740	1740	2270	330	414	137	29	21
10	13	272	197	2350	680	1240	1990	3330	656	87	20	24
11	13	166	183	1300	600	969	1440	2370	823	65	15	25
12	12	145	165	2060	560	806	1090	1110	424	43	14	21
13	12	174	157	3780	540	655	876	809	342	77	13	17
14	11	271	152	3260	17800	579	699	543	1710	65	13	16
15	11	243	146	9570	25500	551	594	484	3060	32	13	18
16	10	215	135	5640	27700	469	541	943	6680	20	12	44
17	10	203	131	2280	17900	407	478	906	2850	15	11	273
18	9.9	190	127	1450	5550	387	418	548	1490	14	11	477
19	9.8	309	128	1080	2160	490	492	413	990	13	255	284
20	9.5	5850	124	850	1540	722	650	376	2460	57	402	203
21	9.6	9960	140	664	7500	5710	463	485	2890	641	228	148
22	10	4440	165	539	9150	6240	389	543	1530	576	287	120
23	10	1310	751	481	3890	2640	355	2960	853	284	304	124
24	11	784	5030	452	1790	1490	323	3510	517	217	355	1260
25	11	557	8040	474	1250	1070	306	1610	400	151	922	1210
26	11	445	3450	370	906	824	287	1050	334	111	917	566
27	11	414	1500	330	849	637	288	1010	273	93	577	351
28	11	422	1240	300	673	520	343	965	246	73	300	261
29	11	500	2110	280	---	475	301	710	225	51	213	212
30	11	461	1730	250	---	1120	303	485	224	36	171	186
31	11	---	1130	240	---	2960	---	402	---	24	147	---
TOTAL	544.8	28074	29474	51463	145300	62500	36336	28139	34346	4194	5924	6437
MEAN	17.6	936	951	1660	5189	2016	1211	908	1145	135	191	215
MAX	70	9960	8040	9570	27700	13600	4420	3510	6680	641	922	1260
MIN	9.5	11	124	240	220	387	287	254	224	13	11	16
CFSM	.03	1.51	1.53	2.67	8.36	3.25	1.95	1.46	1.84	.22	.31	.35
IN.	.03	1.68	1.77	3.08	8.70	3.74	2.18	1.69	2.06	.25	.35	.39

CAL YR 1988 TOTAL 195749.4 MEAN 535 MAX 10900 MIN 1.6 CFSM .86 IN. 11.73
WTR YR 1989 TOTAL 432731.8 MEAN 1186 MAX 27700 MIN 9.5 CFSM 1.91 IN. 25.92

03253500 LICKING RIVER AT CATAWBA, KY

LOCATION.--Lat 38°42'31", long 84°18'38", Pendleton County, Hydrologic Unit 05100101, on right bank 1 mi southeast of Catawba, 1.5 mi upstream from Kincaid Creek, 2.3 mi north of Falmouth, and at mile 48.0.

DRAINAGE AREA.--3,300 mi^2.

PERIOD OF RECORD.--January 1914 to July 1920 (January 1914 to July 1915 and October 1917 to July 1920, gage heights only), July 1928 to current year. Published as "at Falmouth" 1914-16. Gage-height records collected in this vicinity since 1887 are published in reports of the National Weather Service.

REVISED RECORDS.--WSP 853: 1937. WSP 1003: 1943. WSP 1385: 1942. WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 500.01 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Jan. 1, 1914 to July 31, 1916, nonrecording gage at site 3.8 mi upstream at datum 12.2 ft higher. July 14, 1916 to July 5, 1920, nonrecording gage at site 1.4 mi downstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 27 to Feb. 1. Records fair. Flow regulated since December 1973 by Cave Run Lake (station 03249498). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--63 years (Water years 1916-17, 1929-89), 4,084 ft^3/s, 16.81 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,000 ft^3/s, Mar. 10, 1964, gage height, 52.60 ft; minimum, 2.5 ft^3/s, Aug. 5, Oct. 14, 18, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76,800 ft^3/s, Feb. 16, gage height, 43.98 ft; minimum daily discharge, 182 ft^3/s, Aug. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	391	5170	7220	1600	7020	18100	6580	2170	870	1950	513
2	431	394	5010	7120	1660	6810	15200	6020	1690	752	1840	517
3	411	396	4860	7050	11700	6710	11000	5630	1430	686	1140	516
4	385	393	4740	6610	19900	6310	13900	5230	1630	707	1720	447
5	377	410	4630	6120	18900	10800	14200	4950	2060	787	1870	411
6	427	417	4530	6580	10900	30200	16100	5380	2910	997	1820	389
7	712	444	4030	8370	6570	35200	13200	4800	4460	1170	1480	365
8	794	557	3280	14000	6680	26000	11200	4310	3180	1260	902	343
9	774	679	2680	16500	6750	15900	12000	6940	2010	1230	811	328
10	598	692	2030	15000	6320	9560	11900	13000	1990	1100	716	325
11	518	1000	1310	8260	6080	8690	10600	15100	3740	1000	465	295
12	511	1160	756	12700	5960	8180	9130	10900	3230	932	359	295
13	505	1490	585	14800	6970	7630	8080	6970	2270	768	324	296
14	457	1310	555	14300	33200	7280	7360	5890	3380	1010	258	300
15	382	1170	548	26000	56500	7120	6880	6450	7510	640	205	320
16	358	1180	528	24500	74500	6970	6610	8600	14300	616	186	318
17	352	1160	510	15800	74800	6680	6500	8660	13500	511	182	1080
18	368	1090	476	8100	60800	6430	6740	7180	9370	438	428	811
19	369	1240	467	6480	36500	6480	8290	6110	6810	370	2070	1070
20	358	13800	474	6670	19500	8060	8120	5840	7400	791	431	961
21	366	26200	499	6420	23300	21900	7520	5880	10900	2900	893	1950
22	380	25700	750	5940	29400	23800	6710	5210	9910	4500	2730	3150
23	363	17200	3910	4870	25600	18000	5750	8620	7150	3930	1290	3680
24	385	7750	16000	3730	15900	11200	4490	11300	5140	2440	1430	4530
25	388	5280	24900	3350	8500	9170	3670	7940	4120	1360	1620	6360
26	390	5640	20800	2790	7910	8200	3500	6070	3400	1050	1800	4070
27	396	5660	12200	2300	7960	7510	4290	5620	2580	835	2170	2550
28	423	5090	9360	2270	7520	7020	4910	5330	1750	651	1380	3440
29	426	4480	10200	2220	---	6940	6890	4900	1110	539	923	3640
30	412	4980	9740	2000	---	12900	6780	4110	971	595	763	3470
31	400	---	8050	1640	---	17100	---	3070	---	2470	600	---
TOTAL	13808	137353	163578	269710	591880	371770	269620	212590	142071	37905	34756	46740
MEAN	445	4578	5277	8700	21140	11990	8987	6858	4736	1223	1121	1558
MAX	794	26200	24900	26000	74800	35200	18100	15100	14300	4500	2730	6360
MIN	352	391	467	1640	1600	6310	3500	3070	971	370	182	295

CAL YR 1988 TOTAL 999522 MEAN 2731 MAX 32000 MIN 25
WTR YR 1989 TOTAL 2291781 MEAN 6279 MAX 74800 MIN 182

03254000 LICKING RIVER AT BUTLER, KY
(National stream-quality accounting network)

WATER-QUALITY RECORDS

LOCATION.--Lat 38°47'22", long 84°21'05", Pendleton County, Hydrologic Unit 05100101, at bridge on U.S. Highway 27, 0.4 mi downstream from Flour Creek, 1.0 mi east of Butler, and at mile 36.7.

DRAINAGE AREA.--3,375 mi^2.

PERIOD OF RECORD.--Water years 1950, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1949 to September 1950, October 1974 to July 1981.
WATER TEMPERATURES: October 1949 to September 1951, October 1974 to July 1981.

REMARKS.--Flow regulated by Cave Run Lake. Records of daily discharge are published for gaging station at Catawba (station 03253500) 11.3 mi upstream, drainage area, 3,300 mi^2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
NOV 1988												
30...	1200	4560	276	7.70	9.0	18	11.2	99	130	490	100	44
FEB 1989												
16...	1600	81400	158	7.60	6.5	350	--	--	--	--	69	17
MAY												
10...	1035	14200	239	8.16	12.5	140	7.7	74	6400	44000	120	24
AUG												
09...	1200	936	230	7.69	21.5	28	7.6	87	630	1200	88	30

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1988											
30...	30	7.2	11	2.4	75	--	61	61	18	33	0.10
FEB 1989											
16...	23	2.7	1.5	2.9	62	--	51	52	3.2	19	0.20
MAY											
10...	38	5.5	3.0	2.1	102	6	93	95	3.4	24	0.20
AUG											
09...	25	6.1	4.6	2.3	70	--	57	57	6.3	30	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1988											
30...	5.2	139	148	0.010	0.910	0.050	0.090	0.50	0.090	0.030	0.070
FEB 1989											
16...	4.6	92	94	0.020	1.10	0.090	0.030	2.2	1.10	0.170	0.130
MAY											
10...	5.3	147	140	<0.010	0.260	0.060	<0.010	0.80	0.280	0.060	0.020
AUG											
09...	6.3	118	117	<0.010	0.360	0.010	0.010	0.50	0.080	0.040	0.030

03254000 LICKING RIVER AT BUTLER, KY--Continued
(National stream-quality accounting network)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV 1988 30...	<10	1	32	<0.5	3	<1	<3	<1	27	<5	<4
FEB 1989 16...	120	<1	10	<0.5	<1	<1	<3	3	190	<5	<4
MAY 10...	120	<1	14	<0.5	2	<1	<3	4	180	1	<4
AUG 09...	20	<1	18	<0.5	<1	<1	<3	2	22	<1	<4

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 1988 30...	1	<10	4	<1	1.0	150	<6	4	38	474	83
FEB 1989 16...	8	<10	1	<1	<1.0	46	<6	4	570	125000	86
MAY 10...	10	<10	2	4	<1.0	110	<6	7	282	10800	90
AUG 09...	5	<10	<1	<1	<1.0	89	<6	7	31	78	94

OHIO RIVER MAIN STEM

03277200 OHIO RIVER AT MARKLAND DAM, KY

LOCATION.--Lat 38°46'29", long 84°57'52", Gallatin County, Hydrologic Unit 05090203, at left end of Markland Dam, 0.4 mi upstream from Stephens Creek, 3.4 mi west of Warsaw, and at mile 531.5.

DRAINAGE AREA.--83,170 mi^2, approximately.

PERIOD OF RECORD.--May 1970 to current year.

REVISED RECORDS.--WDR KY-88-1: 1987.

GAGE.--Gate opening and water-stage recorders on left bank. Turbine recorders in powerplant on right bank. Datum of headwater gage 0.5 mi upstream is 443 ft Ohio River datum. Datum of tailwater gage 0.4 mi downstream is 35 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Daily discharge computed from head, gate openings, lockages, and turbine flows. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream from station.

COOPERATION.--Flows for periods Oct. 1-14, Dec. 3-8, Apr. 11 to Aug. 30, when the console malfunctioned, were determined using readings from the U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--19 years, 116,100 ft^3/s, 18.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 542,000 ft^3/s, Mar. 17, 1978, maximum headwater gage height, 21.48 ft, Dec. 13, 1978, maximum tailwater gage height, 55.25 ft, Dec. 13, 1978; minimum daily discharge, 4,320 ft^3/s, Sept. 23, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 26, 1937, reached a stage of 76.1 ft (tailwater gage).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 448,000 ft^3/s, Feb. 19, maximum headwater gage height, 15.62 ft, Feb. 19, maximum tailwater gage height, 49.48 ft, Feb. 19; minimum daily, 8,500 ft^3/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14300	22200	56800	131000	75200	155000	295000	304000	177000	204000	65700	54300
2	11500	21000	64900	114000	87800	145000	313000	296000	152000	179000	53800	51800
3	16400	16800	67700	98900	106000	126000	327000	280000	144000	147000	40300	42300
4	13100	15400	53100	96800	160000	117000	368000	274000	138000	127000	40700	26300
5	11600	20100	51200	101000	202000	130000	359000	272000	128000	121000	40300	24600
6	17800	19600	37000	100000	201000	207000	320000	263000	134000	121000	65700	28100
7	18500	41800	27700	104000	163000	270000	301000	254000	134000	122000	95100	26600
8	18500	66000	41000	162000	114000	339000	286000	278000	140000	128000	80200	22000
9	17700	53800	34200	184000	96500	367000	270000	302000	146000	120000	55300	27200
10	9250	43700	32600	178000	69300	370000	249000	312000	146000	111000	29600	39600
11	8500	56100	26800	176000	56400	326000	256000	310000	129000	106000	35500	19100
12	9170	49100	20900	189000	49500	237000	234000	333000	126000	103000	28800	22800
13	18200	39900	18100	200000	59200	186000	209000	358000	120000	85100	20300	31800
14	19400	39000	22200	255000	159000	166000	181000	373000	117000	104000	19200	25000
15	12900	45000	21400	325000	272000	157000	155000	360000	139000	91400	18500	34700
16	13800	54800	16700	322000	366000	144000	142000	344000	170000	72000	18000	75300
17	18300	49900	16900	271000	412000	132000	131000	311000	252000	64700	22600	117000
18	18600	44400	20000	226000	438000	123000	114000	302000	298000	50400	29700	138000
19	14500	41500	21000	180000	448000	116000	123000	293000	331000	71700	37600	102000
20	17600	86500	20800	130000	423000	127000	143000	269000	333000	70300	38400	59200
21	17900	164000	18100	98200	355000	193000	149000	244000	293000	67000	51500	58400
22	22600	191000	39600	78300	325000	227000	144000	210000	252000	87200	67600	40100
23	28100	208000	51200	74800	338000	269000	127000	202000	260000	79800	88100	62200
24	19900	150000	109000	60800	351000	276000	117000	226000	277000	56200	117000	121000
25	19000	113000	186000	58200	342000	234000	100000	213000	281000	60800	139000	163000
26	26900	97700	230000	61700	295000	205000	106000	216000	255000	53000	156000	138000
27	29800	71100	212000	63100	220000	188000	169000	240000	228000	47300	143000	102000
28	26100	57600	194000	67500	175000	174000	232000	256000	203000	71400	104000	83900
29	16800	66600	165000	81600	---	160000	279000	256000	192000	90600	73200	70400
30	16900	60900	147000	84000	---	201000	304000	239000	204000	78000	64200	35500
31	17000	---	141000	84100	---	248000	---	217000	---	74300	57900	---
TOTAL	540620	2006500	2163900	4356000	6358900	6315000	6503000	8607000	5899000	2964200	1896800	1842200
MEAN	17440	66880	69800	140500	227100	203700	216800	277600	196600	95620	61190	61410
MAX	29800	208000	230000	325000	448000	370000	368000	373000	333000	204000	156000	163000
MIN	8500	15400	16700	58200	49500	116000	100000	202000	117000	47300	18000	19100

CAL YR 1988 TOTAL 22467220 MEAN 61390 MAX 311000 MIN 6380
WTR YR 1989 TOTAL 49453120 MEAN 135500 MAX 448000 MIN 8500

03277450 CARR FORK NEAR SASSAFRAS, KY

LOCATION.--Lat 37°13'52", long 83°02'10", Knott County, Hydrologic Unit 05100201, on left bank 0.3 mi downstream from Sassafras Creek, 0.5 mi downstream from Carr Fork Dam, 0.6 mi upstream from Rowdy Hollow, 1.3 mi northeast of Sassafras, and at mile 8.3.

DRAINAGE AREA.--60.6 mi^2.

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 940.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 27, 1966, nonrecording gage at site 0.3 mi upstream at datum 6.39 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Carr Fork Lake beginning January 1976 (station 03277446). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--26 years, 74.4 ft^3/s, 16.67 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,390 ft^3/s, Mar. 7, 1967, gage height, 19.24 ft, from floodmark; no flow at times in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1963 reached a stage of 17.62 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
June 17	0800	*960	*10.87				

Minimum discharge, 1.5 ft^3/s, Sept. 19, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	40	153	20	115	15	266	9.0	31	54	5.3
2	27	24	40	153	20	51	15	474	9.1	31	6.8	12
3	26	24	40	152	22	14	16	314	8.9	38	6.4	20
4	26	24	40	150	77	61	26	210	20	46	6.2	15
5	23	27	39	149	150	99	91	211	49	46	23	7.1
6	25	26	30	150	150	169	159	234	52	92	111	5.1
7	25	26	21	149	149	255	141	415	104	137	58	5.0
8	25	25	21	154	148	456	157	567	156	95	8.1	4.9
9	24	25	21	154	132	451	138	625	195	47	6.4	4.9
10	23	29	21	152	53	273	71	626	204	19	6.6	4.8
11	24	27	21	60	12	163	41	562	88	18	6.5	4.7
12	23	25	21	38	12	163	65	333	44	18	5.6	4.7
13	23	24	21	172	57	163	81	159	148	18	5.6	4.7
14	23	24	21	452	101	163	57	149	214	18	5.6	22
15	23	25	21	466	84	140	67	147	224	18	4.9	72
16	23	25	21	398	86	120	84	153	383	12	4.4	95
17	24	27	21	240	172	59	64	158	862	7.1	6.8	102
18	24	26	21	130	291	16	53	115	922	7.2	34	2.0
19	24	26	21	97	290	15	53	67	901	6.9	102	47
20	23	36	21	66	289	16	53	86	626	6.9	51	97
21	23	86	24	56	275	24	53	127	276	6.9	7.8	79
22	25	161	40	27	179	22	32	145	127	6.9	31	163
23	24	159	57	9.5	436	20	16	128	98	6.9	52	174
24	26	158	67	9.5	584	20	37	57	86	6.9	30	162
25	25	157	83	21	426	19	52	20	68	6.4	31	108
26	25	157	149	38	149	19	25	51	46	5.0	22	3.9
27	25	156	149	38	148	18	51	79	31	5.4	6.4	2.8
28	25	101	149	38	130	18	97	59	35	5.2	5.6	71
29	25	33	152	37	---	18	124	42	41	5.0	5.4	154
30	25	40	155	37	---	18	155	40	31	5.4	5.5	154
31	24	---	154	30	---	15	---	23	---	55	5.3	---
TOTAL	756	1727	1702	3976.0	4642	3173	2089	6642	6058.0	827.1	714.9	1606.9
MEAN	24.4	57.6	54.9	128	166	102	69.6	214	202	26.7	23.1	53.6
MAX	27	161	155	466	584	456	159	626	922	137	111	174
MIN	23	24	21	9.5	12	14	15	20	8.9	5.0	4.4	2.0

CAL YR 1988 TOTAL 9623.1 MEAN 26.3 MAX 161 MIN 4.6
WTR YR 1989 TOTAL 33913.9 MEAN 92.9 MAX 922 MIN 2.0

03277500 NORTH FORK KENTUCKY RIVER AT HAZARD, KY

LOCATION.--Lat 37°14'48", long 83°10'55", Perry County, Hydrologic Unit 05100201, on right bank 300 ft upstream from the Woodland Park bridge in intake tower of the Hazard Water Plant on State Highway 15 at eastern limits of Hazard, 450 ft upstream from city waterworks dam, 4.0 mi upstream from Lotts Creek, and at mile 361.0.

DRAINAGE AREA.--466 mi^2.

PERIOD OF RECORD.--January 1940 to current year. Gage-height records collected in the vicinity since 1925 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 953: 1940. WSP 1385: 1942-48, 1949(M), 1950-51, 1953, drainage area. WSP 1505: 1951.

GAGE.--Water-stage recorder. Datum of gage is 839.76 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 25, 1965, nonrecording gage at site 300 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Jan. 8-10. Records good for water year 1988. Estimated daily discharges: Mar. 12 to May 16 and June 18 to Sept. 6. Records good for water year 1989 except for estimated daily discharges, which are poor. Small diversion by city of Hazard waterworks and electric plant above station. Flow regulated by Carr Fork Lake beginning January 1976 (station 03277446). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 571 ft^3/s, 16.64 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,800 ft^3/s, Jan. 29, 1957, gage height, 37.54 ft, from floodmark, from rating curve extended above 20,000 ft^3/s, on basis of contracted-opening measurement of peak flow; minimum not determined; minimum gage height observed, 3.20 ft, June 28, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1927, reached a stage of about 34 ft, from information by local residents, National Weather Service gage readings, and relation of 1927 and 1939 floods. Flood of Feb. 3, 1939, reached a stage of 29.95 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--

Water year 1988: Peak discharges greater than base discharge of 7,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 26	1200	*4,980	*9.07				

Minimum daily discharge, 12 ft^3/s, Aug. 18.

Water year 1989: Peak discharges greater than base discharge of 7,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 21	1700	7,630	11.48	May 6	Unknown	Unknown	Unknown
Mar. 6	1230	15,800	17.76	June 16	0130	*24,100	*23.43

Minimum daily discharge, 51 ft^3/s, Oct. 13, 14.

03277500 NORTH FORK KENTUCKY RIVER AT HAZARD, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	151	55	46	431	147	178	126	212	95	32	20	25
2	111	56	43	464	164	175	132	196	85	30	22	27
3	82	54	41	421	483	169	150	173	78	30	20	20
4	76	54	46	392	849	156	153	215	96	29	13	41
5	75	53	46	270	1170	193	157	594	73	29	13	192
6	69	51	48	155	838	188	161	530	66	29	46	121
7	68	53	50	129	594	178	684	456	63	27	81	83
8	62	55	42	120	549	180	2390	379	55	24	81	61
9	60	53	45	115	404	173	1360	325	61	21	56	48
10	60	94	46	110	338	177	882	318	113	20	35	45
11	57	142	36	105	266	176	659	276	104	19	23	42
12	55	136	32	101	248	150	527	224	64	22	15	41
13	59	101	32	122	218	169	512	206	48	31	15	39
14	63	67	34	136	169	197	423	183	40	55	16	39
15	55	62	49	120	226	185	371	161	35	52	25	36
16	67	54	42	110	224	178	307	196	29	41	19	30
17	63	81	38	117	200	167	272	949	28	40	17	257
18	60	153	32	162	178	159	288	503	30	39	12	499
19	56	160	30	321	170	176	449	327	26	49	17	216
20	60	101	29	1700	171	174	406	257	22	82	23	99
21	62	79	28	1110	172	172	376	206	38	85	33	80
22	99	66	26	750	152	158	365	176	51	149	123	67
23	88	62	26	586	159	149	336	158	39	100	58	67
24	67	55	24	486	213	144	576	175	44	63	54	146
25	55	53	1320	434	222	151	486	324	49	43	37	496
26	55	50	2350	377	215	157	407	418	40	34	38	360
27	54	50	1100	242	213	164	362	243	42	32	28	190
28	53	48	872	228	212	153	306	189	79	32	21	128
29	51	46	935	205	195	135	265	162	61	48	21	98
30	52	46	664	164	---	124	235	133	41	40	20	81
31	54	---	498	158	---	118	---	110	---	25	16	---
TOTAL	2099	2190	8650	10341	9359	5123	14123	8974	1695	1352	1018	3674
MEAN	67.7	73.0	279	334	323	165	471	289	56.5	43.6	32.8	122
MAX	151	160	2350	1700	1170	197	2390	949	113	149	123	499
MIN	51	46	24	101	147	118	126	110	22	19	12	20

CAL YR 1987 TOTAL 179382 MEAN 491 MAX 9330 MIN 19
WTR YR 1988 TOTAL 68598 MEAN 187 MAX 2390 MIN 12

03277500 NORTH FORK KENTUCKY RIVER AT HAZARD, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	69	190	328	159	684	600	3800	145	320	390	150
2	66	67	168	363	147	623	540	5000	150	450	240	170
3	60	63	138	334	346	566	1000	3000	198	360	180	190
4	60	65	128	322	1520	594	2000	2300	227	300	140	150
5	60	97	120	299	1160	760	2500	1800	272	400	170	120
6	59	263	112	414	950	10500	1800	6000	872	510	600	100
7	60	216	95	647	843	3290	1400	9200	3430	480	320	86
8	60	154	89	913	705	1950	1000	5000	1350	600	190	85
9	59	124	88	1010	580	1570	830	3700	2720	450	160	77
10	54	137	87	822	417	1280	690	2900	2500	340	130	71
11	55	165	84	616	344	1030	620	2000	1170	280	110	67
12	53	154	75	1610	301	840	590	1600	796	230	91	98
13	51	130	69	3490	328	550	520	1200	2050	200	79	122
14	51	118	72	1990	1150	900	420	780	1340	180	70	145
15	54	108	74	3310	1930	600	510	700	4560	140	65	327
16	52	99	71	2110	1710	500	600	920	13600	120	61	2640
17	55	189	69	1290	1870	450	500	824	6620	100	150	1020
18	60	264	68	898	1620	440	470	613	2000	90	800	396
19	60	193	65	670	1380	490	440	374	1400	80	500	249
20	63	655	67	473	1470	900	400	643	1000	180	300	309
21	63	699	98	361	5430	1420	370	706	800	140	240	191
22	72	477	359	282	3670	2700	350	526	640	120	200	598
23	101	360	551	235	2020	1700	320	1310	900	100	240	1460
24	123	302	1080	218	1640	1300	290	880	680	150	300	395
25	96	263	1670	199	1310	1000	270	488	500	120	250	185
26	87	244	856	196	1000	850	420	385	400	96	210	414
27	76	256	524	189	890	730	900	863	300	140	180	623
28	69	319	410	173	824	660	1500	623	700	200	160	452
29	69	255	374	162	---	580	1900	364	500	180	140	417
30	69	221	303	177	---	500	2800	264	380	150	110	395
31	69	---	282	193	---	550	---	192	---	180	130	---
TOTAL	2058	6726	8436	24294	35714	40507	26550	58955	52200	7386	6906	11702
MEAN	66.4	224	272	784	1275	1307	885	1902	1740	238	223	390
MAX	123	699	1670	3490	5430	10500	2800	9200	13600	600	800	2640
MIN	51	63	65	162	147	440	270	192	145	80	61	67

CAL YR 1988 TOTAL 72879 MEAN 199 MAX 2390 MIN 12
WTR YR 1989 TOTAL 281434 MEAN 771 MAX 13600 MIN 51

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY

LOCATION.--Lat 37°32'46", long 83°22'21", Breathitt County, Hydrologic Unit 05100201, on left bank at city water plant on Armory Drive at Jackson, 2.8 mi downstream from Quicksand Creek, and at mile 305.0.

DRAINAGE AREA.--1,101 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1928 to September 1931, December 1936 to February 1937, April 1938 to current year. Gage-height records collected at same site during periods 1904-07, 1921-31, and February to December 1934 (above 8.0 ft only), January 1935 to September 1976 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 853: 1929(M). WSP 1335: 1928(M), 1929, 1931(M), WSP 1435: 1954-55: WSP 1505: 1948. WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 697.67 ft above National Geodetic Vertical Datum of 1929. Prior to October 1, 1941, at datum 1.00 ft higher. Oct. 1, 1941 to Aug. 22, 1975, nonrecording gage at same site and datum. Aug. 23, 1975 to Aug. 22, 1980, water-stage recorder 0.5 mi downstream at present datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Small diversions by city of Jackson waterworks. Flow regulated by Carr Fork Lake (station 03277446) beginning January 1976.

AVERAGE DISCHARGE.--54 years (Water years 1929-31, 1939-89), 1,343 ft^3/s, 16.56 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,500 ft^3/s, Jan. 30, 1957; maximum gage height, 43.10 ft, Feb. 4, 1939, present datum; no flow Oct. 16, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1926, that of Feb. 4, 1939. Flood of May 30, 1927, reached a stage of 42.9 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	0300	16,500	22.16	June 16	2300	*30,100	*32.77
Mar. 7	0400	24,800	28.79				

Minimum discharge, 72 ft^3/s, Oct. 13-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	118	606	1110	744	1620	1580	4330	795	932	587	413
2	146	114	503	1040	670	1420	1500	7330	660	1170	959	504
3	129	108	427	941	1610	1280	1660	5300	955	1100	618	525
4	118	102	376	864	3870	1140	3210	3290	724	927	460	488
5	107	211	337	776	3380	3250	4580	2850	703	915	349	385
6	99	582	305	893	2540	17900	3530	9470	1220	1300	1040	331
7	94	600	284	1390	2010	22500	2770	10600	2950	1280	1110	296
8	88	522	262	1920	1670	9970	2400	6390	3280	1560	732	288
9	85	389	241	2610	1410	3720	2290	5020	2100	1270	436	274
10	81	340	231	2200	1180	2940	1970	7430	4090	900	321	260
11	80	482	224	1800	1070	2360	1670	5140	2760	680	272	266
12	77	493	192	3730	1000	1990	1480	3840	1670	563	237	330
13	73	405	183	9940	1160	1820	1360	3150	3320	489	209	282
14	72	343	177	6770	3210	2230	1250	2320	3580	448	190	329
15	72	293	169	5580	6070	2150	1330	2230	5260	423	178	746
16	72	257	182	6260	7770	1860	1430	2710	24100	387	170	4100
17	73	356	180	3700	6360	1610	1330	2150	27000	349	180	4030
18	72	457	167	2590	4500	1470	1240	1790	14300	316	1430	1650
19	76	551	156	1950	3610	1350	1160	1510	4930	291	1100	860
20	81	2970	154	1520	3140	1320	1090	1570	3620	611	949	614
21	92	3120	410	1270	12100	4350	1020	1980	2720	454	696	594
22	113	1440	1660	1060	14800	4890	951	1630	2130	336	485	667
23	156	946	1500	930	7190	3530	894	2620	2270	286	568	3610
24	236	723	4620	822	4070	3090	835	2950	1650	338	754	3760
25	365	602	7790	746	3200	2860	802	2040	1410	292	916	2220
26	284	516	3310	684	2660	2450	795	1810	1120	252	808	1740
27	217	502	1880	668	2160	2090	902	2070	1010	242	598	1660
28	180	786	1500	622	1880	1770	2520	2060	1760	542	480	1330
29	156	932	1690	586	---	1550	2550	1520	1680	511	411	1050
30	142	726	1410	628	---	1440	3580	1180	1220	424	398	1010
31	128	---	1210	788	---	1520	---	957	---	433	408	---
TOTAL	3936	19986	32336	66388	105034	113440	53679	109237	124987	20021	18049	34612
MEAN	127	666	1043	2142	3751	3659	1789	3524	4166	646	582	1154
MAX	365	3120	7790	9940	14800	22500	4580	10600	27000	1560	1430	4100
MIN	72	102	154	586	670	1140	795	957	660	242	170	260
CFSM	.12	.61	.95	1.95	3.41	3.32	1.63	3.20	3.78	.59	.53	1.05
IN.	.13	.68	1.09	2.24	3.55	3.83	1.81	3.69	4.22	.68	.61	1.17

CAL YR 1988 TOTAL 202804 MEAN 554 MAX 7790 MIN 26 CFSM .50 IN. 6.85
WTR YR 1989 TOTAL 701705 MEAN 1922 MAX 27000 MIN 72 CFSM 1.75 IN. 23.71

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-75, 1979 to August 1981 and April 1987 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1949 to September 1963, unpublished; October 1963 to September 1975.
SUSPENDED-SEDIMENT DISCHARGE: August 1979 to August 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 1988												
17...	1615	73	810	8.10	27.0	13.0	11.1	109	370	250	78	43
NOV												
14...	1630	334	622	7.90	21.0	9.0	10.9	97	280	180	61	30
DEC												
19...	1545	153	762	8.20	7.0	1.0	13.8	100	330	220	71	37
JAN 1989												
12...	1745	3410	316	7.70	12.5	7.5	10.5	90	130	83	28	14
13...	0800	10700	L263	7.90	2.0	8.0	10.3	88	110	77	25	12
17...	1600	3170	303	7.50	6.0	6.0	11.4	94	130	91	29	14
FEB												
15...	1500	7230	301	7.30	11.0	8.0	11.1	96	120	81	27	13
22...	1545	16900	236	6.90	0.5	7.0	10.5	89	96	57	22	9.9
MAR												
06...	1630	21400	222	6.90	4.0	9.0	11.5	103	90	63	21	9.2
20...	1545	1300	501	7.64	15.0	10.0	11.4	105	220	160	46	25
APR												
18...	0800	1220	470	7.80	14.0	14.0	9.4	94	210	150	44	24
MAY												
10...	0900	8110	286	7.20	12.0	12.0	9.6	93	110	77	24	13
16...	0830	2910	443	7.54	11.0	14.0	9.0	90	200	150	42	22
JUN												
15...	1945	10400	276	7.72	20.0	19.0	8.2	92	130	58	29	13
16...	1445	31500	188	7.17	22.0	18.5	7.9	87	80	49	20	7.3
23...	0830	2450	361	7.28	25.0	22.0	8.1	96	160	110	36	18
JUL												
14...	0830	444	629	7.76	22.0	23.5	7.6	94	310	220	66	34
SEP												
22...	0900	443	502	7.59	21.5	20.5	7.6	90	230	150	52	25

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA- LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 1988											
17...	34	16	0.8	5.2	120	147	122	280	16	0.030	1.4
NOV											
14...	23	15	0.6	4.5	98	120	99	190	14	0.030	5.1
DEC											
19...	28	15	0.7	3.5	110	134	110	240	16	0.046	3.0
JAN 1989											
12...	6.1	9	0.2	2.4	44	54	45	86	4.3	0.024	6.5
13...	4.9	8	0.2	2.4	34	44	35	81	4.0	0.022	6.3
17...	7.3	11	0.3	2.4	40	49	39	92	4.7	0.013	7.3
FEB											
15...	7.7	12	0.3	2.2	39	48	40	81	6.4	0.010	6.1
22...	4.8	10	0.2	2.0	39	47	39	66	3.2	0.010	6.6
MAR											
06...	3.7	8	0.2	2.2	27	33	28	64	2.7	<0.010	5.3
20...	13	11	0.4	2.7	61	74	62	170	5.5	<0.010	7.2
APR											
18...	13	12	0.4	2.8	58	71	57	160	5.0	0.010	5.8
MAY											
10...	5.6	9	0.2	2.3	35	42	34	86	2.3	<0.010	7.4
16...	9.2	9	0.3	2.9	50	61	50	150	3.4	<0.010	7.4
JUN											
15...	5.2	8	0.2	2.4	48	58	47	81	2.0	0.010	7.2
16...	2.7	7	0.1	2.5	30	37	30	52	1.5	0.060	6.1
23...	7.8	9	0.3	2.9	49	60	50	120	2.8	0.020	7.7
JUL											
14...	16	10	0.4	4.0	87	106	85	230	6.1	0.010	7.7
SEP											
22...	13	11	0.4	3.3	88	107	87	160	6.6	<0.010	8.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 1988											
17...	553	533	0.75	109	--	<0.01	0.02	0.20	0.4	0.02	<0.01
NOV											
14...	404	390	0.55	364	0.39	0.01	0.01	0.40	0.4	0.02	<0.01
DEC											
19...	481	468	0.65	191	0.49	0.01	0.06	0.50	0.3	0.02	<0.01
JAN 1989											
12...	176	176	0.24	1620	--	<0.01	0.05	0.35	0.5	0.03	<0.01
13...	141	159	0.19	4070	--	<0.01	0.07	0.35	0.6	0.06	<0.01
17...	194	183	0.26	1660	--	<0.01	0.03	0.52	0.5	0.02	<0.01
FEB											
15...	175	170	0.24	3420	0.39	0.01	0.01	0.40	0.8	0.16	0.01
22...	137	140	0.19	6250	--	<0.01	0.03	0.38	0.6	0.27	<0.01
MAR											
06...	136	127	0.18	7860	0.32	0.01	0.04	0.33	2.6	0.44	<0.01
20...	319	308	0.43	1120	0.51	0.03	0.03	0.54	0.2	0.03	0.01
APR											
18...	298	291	0.41	982	--	<0.01	0.02	0.34	0.2	0.02	<0.01
MAY											
10...	156	165	0.21	3420	--	<0.01	<0.01	0.31	0.3	0.03	<0.01
16...	270	269	0.37	2120	--	<0.01	0.02	0.47	0.3	0.04	<0.01
JUN											
15...	165	183	0.22	4630	--	<0.01	0.01	0.33	0.2	0.07	<0.01
16...	133	112	0.18	11300	--	<0.01	0.03	0.27	0.5	0.06	<0.01
23...	238	228	0.32	1570	0.53	0.01	0.15	0.54	0.9	0.02	<0.01
JUL											
14...	433	420	0.59	519	-	<0.01	0.02	0.56	0.3	<0.01	0.01
SEP											
22...	331	323	0.45	396	-	<0.01	0.02	0.69	0.5	0.02	<0.01

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
17...	0.02	<10	1	57	<0.5	30	<0.1	<0.5	<3	1.9	12
NOV											
14...	0.02	30	<1	44	<0.5	30	0.6	<0.5	<3	<0.5	14
DEC											
19...	0.02	20	<1	46	<0.5	20	0.2	<0.5	<3	1.0	10
JAN 1989											
12...	0.03	20	<1	23	<0.5	<10	0.8	0.6	<3	1.5	17
13...	0.06	60	<1	24	<0.5	10	0.2	<0.5	<3	0.7	81
17...	0.02	20	<1	29	<0.5	10	0.2	<0.5	<3	1.1	24
FEB											
15...	0.16	30	1	32	<0.5	<10	<0.1	<0.5	<3	1.0	40
22...	0.27	90	<1	24	<0.5	10	0.2	<0.5	<3	<0.5	130
MAR											
06...	0.44	50	<1	21	<0.5	10	0.4	<0.5	<3	1.4	81
20...	0.03	30	<1	38	<0.5	20	0.2	<0.5	<3	1.3	18
APR											
18...	0.02	30	<1	35	<0.5	20	<0.2	<0.5	<3	<0.5	15
MAY											
10...	0.03	40	<1	26	<0.5	<10	0.2	<0.5	<3	1.2	59
16...	0.04	40	<1	36	<0.5	20	<0.1	<0.5	<3	1.0	12
JUN											
15...	0.07	80	<1	23	<0.5	20	<0.1	<0.5	<3	0.8	99
16...	0.06	70	<1	22	<0.5	30	<0.1	0.8	<3	0.9	110
23...	0.02	90	<1	35	<0.5	20	0.3	0.5	<3	1.4	130
JUL											
14...	--	50	<1	49	<0.5	20	0.1	<0.5	<3	1.1	14
SEP											
22...	0.02	20	1	42	<0.5	20	0.2	<0.5	<3	0.9	12

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
17...	<0.5	15	67	<10	<10	<1.0	760	<6	3	2.8	0.2
NOV											
14...	<0.5	14	80	10	<10	1.0	540	<6	54	2.2	0.2
DEC											
19...	<0.5	14	220	<10	<10	<1.0	640	<6	6	1.7	0.2
JAN 1989											
12...	<0.5	5	56	<10	<10	<1.0	180	<6	<3	2.3	3.5
13...	<0.5	5	130	<10	<10	1.0	160	<6	26	4.2	4.8
17...	<0.5	5	59	<10	<10	<1.0	210	<6	13	1.9	2.3
FEB											
15...	<0.5	13	49	<10	<10	<1.0	200	<6	7	2.3	4.2
22...	<0.5	5	61	<10	<10	<1.0	150	<6	3	1.4	>5.1
MAR											
06...	<0.5	5	72	<10	<10	<1.0	120	<6	21	2.7	>4.9
20...	0.7	13	110	<10	<10	<1.0	430	<6	9	1.8	0.5
APR											
18...	<0.5	12	56	<10	<10	2.0	430	<6	130	1.5	0.2
MAY											
10...	<0.5	5	34	<10	<10	2.0	200	<6	5	2.0	>2.5
16...	2.8	10	20	<10	<10	<1.0	380	<6	4	1.9	>2.5
JUN											
15...	<0.5	5	35	<10	10	<1.0	190	<6	6	3.2	>2.5
16...	<0.5	4	48	<10	<10	<1.0	120	<6	<3	3.7	>2.5
23...	0.7	18	50	<10	<10	9.0	290	<6	10	6.3	>2.4
JUL											
14...	<0.5	15	41	<10	<10	<1.0	650	<6	6	2.8	0.4
SEP											
22...	<0.5	8	44	<10	<10	<1.0	450	<6	4	2.5	0.4

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	CYANIDE DIS- SOLVED (MG/L AS CN)
OCT 1988											
17...	1615	0.10	<1	<1	<0.4	<0.4	8.5	0.7	6.2	0.7	<0.01
JAN 1989											
12...	1745	0.10	<1	<1	<0.4	31	2.8	18	2.1	16	<0.01
13...	0800	0.10	<1	<1	<0.4	11	2.7	33	2.1	29	<0.01
17...	1600	<0.10	<1	<1	<0.4	6.7	2.6	5.9	2.0	5.1	<0.01
FEB											
15...	1500	0.10	<1	<1	1.7	15	3.6	14	2.7	13	<0.01
MAR											
06...	1630	0.10	<1	<1	<0.4	97	2.7	71	2.2	60	<0.01
APR											
18...	0800	0.10	<1	1	<0.4	<0.4	4.6	<0.4	3.5	<0.4	<0.01
MAY											
10...	0900	0.10	<1	<1	0.6	13	3.1	11	2.6	9.8	<0.01
JUN											
15...	1945	0.10	<1	<1	0.6	80	3.1	60	2.3	53	<0.01
16...	1445	0.10	<1	<1	<0.4	87	2.7	71	2.1	63	<0.01
JUL											
14...	0830	0.20	<1	1	0.5	0.6	6.6	0.8	5.0	0.8	<0.01

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 1989								
12...	1745	3500	<100	<10	40	<1	5	10
13...	0800	9100	100	<10	40	<1	12	30
FEB								
15...	1500	4500	<100	<10	30	1	7	10
MAR								
06...	1630	17000	100	<10	20	<1	22	40
MAY								
10...	0900	3400	100	<10	20	<1	6	<10
JUN								
15...	1945	15000	100	<10	50	<1	20	40
16...	1445	20000	100	<10	70	<1	24	40

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SILVER, TOTAL RECOV ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
JAN 1989							
12...	8500	<5	490	2	15	<1	40
13...	20000	11	1300	1	29	<1	100
FEB							
15...	10000	<5	530	8	16	<1	80
MAR							
06...	36000	30	1500	4	33	<1	170
MAY							
10...	8000	8	330	4	11	<1	40
JUN							
15...	38000	31	770	<1	48	<1	160
16...	33000	27	760	60	34	<1	140

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	0730	7.0	5.5	623	8.97	890	25	<0.50	<2.5	<2.5	<2.5	3.3

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	410

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLORO-META CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	520	<250	<500	<250	<250	<250	<500	<250	<250

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	19000	<250	<2500	<250	<250

KENTUCKY RIVER BASIN

03280600 MIDDLE FORK KENTUCKY RIVER NEAR HYDEN, KY

LOCATION.--Lat 37°08'13", long 83°22'17", Leslie County, Hydrologic Unit 05100202, on left bank on U.S. Highway 421, 0.2 mi upstream from unnamed tributary, 0.4 mi downstream from Munsey Creek, 1.7 mi south of Hyden, and at mile 76.1.

DRAINAGE AREA.--202 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 833.00 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 23, 1957, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 21 to Jan. 11 and May 18-23. Water-discharge records good except for estimated discharges which are poor. Small diversion by city of Hyden from reservoir for municipal water supply. Dam for the reservoir completed November 1968. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--32 years, 292 ft^3/s, 19.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,400 ft^3/s, Mar. 12, 1963, gage height, 26.13 ft, from rating curve extended above 18,500 ft^3/s; no flow for several days in 1975, 1984, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 29, 1957, reached a stage of 33.3 ft, discharge, about 60,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	2200	6,080	10.76	May 5	2200	6,110	10.78
Feb. 21	1200	6,350	10.96	June 9	1600	4,370	9.40
Mar. 6	0900	11,100	14.08	June 15	2400	*34,400	*24.95

Minimum daily discharge, 2.1 ft^3/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	52	110	160	104	293	301	1090	192	515	100	76
2	10	40	89	140	100	271	289	1070	177	440	132	112
3	10	34	78	120	286	266	330	623	160	299	79	81
4	8.2	34	68	98	1100	250	1010	431	166	290	49	56
5	4.9	168	60	90	673	361	1120	1960	160	729	40	39
6	3.2	240	55	230	517	6580	686	3490	534	542	53	32
7	2.1	165	50	450	462	1900	529	1620	1570	909	67	30
8	3.4	112	47	1000	382	904	476	863	614	950	42	30
9	3.5	79	44	600	302	591	485	633	1910	577	29	22
10	3.4	68	42	410	255	454	426	559	1260	356	22	14
11	3.0	80	38	300	242	380	370	477	548	245	17	14
12	2.7	77	35	2480	212	324	316	408	451	190	9.8	14
13	2.7	59	33	3190	199	299	270	336	818	239	7.6	14
14	2.5	66	31	1200	1490	282	235	277	529	173	8.6	14
15	2.6	55	28	2810	1700	251	275	334	7660	139	10	66
16	3.0	43	33	1210	1100	217	260	309	9560	118	16	1260
17	14	93	30	652	1080	193	243	274	2880	109	14	286
18	28	119	28	455	819	193	236	240	1180	93	21	151
19	31	108	26	345	619	200	226	200	681	83	42	96
20	33	978	25	272	715	205	209	400	488	82	25	68
21	36	450	70	219	4650	954	191	350	360	77	22	51
22	54	240	340	184	2160	1010	172	300	276	65	40	234
23	69	160	290	165	1020	671	160	870	258	56	25	1010
24	72	120	1500	147	632	646	160	600	263	53	111	711
25	60	100	2580	132	485	555	154	437	206	41	118	300
26	50	90	450	120	430	465	141	570	166	34	66	329
27	46	130	300	114	381	386	176	1050	175	36	63	286
28	42	310	200	100	341	327	194	633	347	56	41	215
29	44	200	300	96	---	287	305	436	314	58	31	160
30	49	150	230	107	---	268	603	321	180	40	122	149
31	50	---	180	115	---	298	---	243	---	91	135	---
TOTAL	753.2	4620	7390	17711	22456	20281	10548	21404	34083	7685	1558.0	5920
MEAN	24.3	154	238	571	802	654	352	690	1136	248	50.3	197
MAX	72	978	2580	3190	4650	6580	1120	3490	9560	950	135	1260
MIN	2.1	34	25	90	100	193	141	200	160	34	7.6	14
CFSM	.12	.76	1.18	2.83	3.97	3.24	1.74	3.42	5.62	1.23	.25	.98
IN.	.14	.85	1.36	3.26	4.14	3.73	1.94	3.94	6.28	1.42	.29	1.09

CAL YR 1988 TOTAL 47680.91 MEAN 130 MAX 3140 MIN .00 CFSM .65 IN. 8.78
WTR YR 1989 TOTAL 154409.2 MEAN 423 MAX 9560 MIN 2.1 CFSM 2.09 IN. 28.44

03280600 MIDDLE FORK KENTUCKY RIVER NEAR HYDEN, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to September 1982, November 1988.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to September 1976, October 1977 to September 1979. October 1980 to September 1982.
WATER TEMPERATURES: October 1974 to September 1976, October 1977 to September 1979. October 1980 to September 1982.
SUSPENDED SEDIMENT DISCHARGE: October 1976 to September 1981.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	1000	8.5	8.0	447	8.38	1100	22	<0.50	<2.5	<2.5	<2.5	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

KENTUCKY RIVER BASIN

03280600 MIDDLE FORK KENTUCKY RIVER NEAR HYDEN, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORO-NAPHTHALENE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	3,3'-DI-CHLORO-BENZIDINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	6600	<250	<2500	<250	<250

03280700 CUTSHIN CREEK AT WOOTON, KY

LOCATION.--Lat 37°9'54", long 83°18'29", Leslie County, Hydrologic Unit 05100202, on right bank 15 ft downstream from bridge on State Highway 80, 400 ft upstream from Poundmill Branch, 600 ft upstream from Rockhouse Branch, 0.7 mi downstream from Saw Branch, 1.0 mi southwest of Wooton, and at mile 10.7.

DRAINAGE AREA.--61.3 mi^2.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 869.84 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 26, 1957, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: June 15-23. Records good except for estimated daily discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--32 years, 93.1 ft^3/s, 20.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft^3/s, Mar. 12, 1963, gage height, 16.23 ft, from rating curve extended above 2,300 ft^3/s, on basis of contracted-opening measurement of peak flow; no flow Sept. 29, 1959, Sept. 12-27, 1964, Sept. 5, 1975, Sept. 20, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1957 reached a stage of 19.43 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	1945	2,260	6.38	Apr. 29	1630	1,900	5.90
Feb. 14	1615	1,560	5.40	May 5	1830	3,120	7.46
Feb. 21	0845	2,560	6.77	June 6	1900	1,520	5.34
Mar. 6	0600	4,530	9.20	June 15	2400	*14,000	*16.10
Apr. 27	0145	1,900	5.90	Sept. 15	2230	1,700	5.61

Minimum daily discharge, 0.80 ft^3/s, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.0	28	41	29	79	67	812	53	79	27	21
2	3.3	4.7	22	36	28	73	61	519	54	71	21	49
3	3.3	4.7	18	33	175	71	87	244	47	59	15	17
4	3.0	5.5	16	31	280	66	344	166	70	63	12	12
5	2.5	42	13	26	175	144	264	1050	64	186	17	9.7
6	2.0	42	12	87	131	2810	174	1040	563	143	29	10
7	1.5	24	12	103	107	543	141	452	524	179	18	18
8	1.4	15	11	234	84	244	126	247	212	164	12	11
9	1.4	10	10	178	67	172	107	205	439	130	9.7	8.8
10	1.4	15	9.1	114	65	134	93	178	258	81	8.4	8.2
11	1.3	19	9.0	90	62	114	82	151	148	55	7.0	7.8
12	1.1	11	5.6	871	55	96	72	125	211	43	6.9	7.9
13	.88	9.8	6.4	807	57	104	65	102	350	43	6.5	16
14	.80	8.0	7.6	289	627	100	59	82	216	39	6.3	28
15	1.0	5.2	9.1	796	537	91	79	117	3700	28	6.7	204
16	1.1	5.9	8.0	285	415	75	68	92	4000	24	7.5	369
17	1.8	32	5.9	164	348	68	64	80	550	22	6.6	94
18	3.4	18	6.0	118	243	72	64	68	280	19	10	46
19	3.8	23	5.7	90	195	62	61	60	180	18	14	29
20	3.8	261	6.8	70	243	75	55	156	130	18	7.5	22
21	5.9	91	37	56	1810	314	52	124	92	14	11	18
22	12	43	69	48	593	240	47	102	72	13	20	258
23	7.5	30	168	43	268	186	44	248	65	12	9.4	412
24	12	23	397	40	181	195	49	168	84	12	15	218
25	9.2	19	253	36	143	164	53	121	54	9.8	15	118
26	5.4	17	102	34	129	134	62	130	41	9.0	15	166
27	3.8	33	65	33	111	111	714	196	40	47	15	112
28	5.1	72	60	29	97	94	205	144	92	42	9.2	76
29	6.2	49	51	28	---	82	697	110	53	21	7.7	55
30	5.5	37	45	34	---	74	551	85	38	14	53	59
31	4.2	---	43	31	---	82	---	66	---	46	18	---
TOTAL	119.18	973.8	1511.2	4875	7255	6869	4607	7440	12680	1703.8	436.4	2480.4
MEAN	3.84	32.5	48.7	157	259	222	154	240	423	55.0	14.1	82.7
MAX	12	261	397	871	1810	2810	714	1050	4000	186	53	412
MIN	.80	4.0	5.6	26	28	62	44	60	38	9.0	6.3	7.8
CFSM	.06	.53	.80	2.57	4.23	3.61	2.51	3.92	6.90	.90	.23	1.35
IN.	.07	.59	.92	2.96	4.40	4.17	2.80	4.51	7.69	1.03	.26	1.51

CAL YR 1988 TOTAL 10856.75 MEAN 29.7 MAX 735 MIN .10 CFSM .48 IN. 6.59
WTR YR 1989 TOTAL 50950.78 MEAN 140 MAX 4000 MIN .80 CFSM 2.28 IN. 30.92

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY

LOCATION.--Lat 37°33'18", long 83°35'38", Lee County, Hydrologic Unit 05100202, on downstream side of left pier of bridge on State Highway 708, 100 ft upstream from Lynam Creek, 0.5 mi southwest of Tallega, 8.3 mi upstream from confluence with North Fork, and at mile 8.3.

DRAINAGE AREA.--537 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to March 1932, October 1939 to current year.

REVISED RECORDS.--WSP 1113: 1931, 1940. WSP 1385: 1931-32, 1948, drainage area. WSP 1505: 1946(M), 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 642.13 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 16-23, July 3-13, July 23 to Aug. 3, Aug. 18-31, and Sept. 26-29. Water-discharge records good. Flow regulated by Buckhorn Lake beginning December 1960 (station 03280800).

AVERAGE DISCHARGE.--51 years (Water years 1931, 1940-89), 720 ft^3/s, 18.21 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,700 ft^3/s, Jan. 30, 1957, gage height, 43.33 ft, from rating curve extended above 14,000 ft^3/s, on basis of contracted-opening measurement of peak flow; minimum daily, 0.1 ft^3/s, Oct. 12-22, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1939 reached a stage of 40.5 ft, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,540 ft^3/s, Mar. 6, gage height, 23.22 ft; minimum daily discharge, 37 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	42	524	366	302	2990	532	2040	512	819	250	284
2	65	41	295	394	295	2850	528	2470	512	574	400	305
3	62	42	137	387	1220	2490	743	3310	379	460	631	355
4	61	41	471	177	1500	1170	1750	2860	309	700	289	363
5	60	56	506	169	1990	2060	2860	1630	316	1150	201	286
6	57	83	327	327	1930	6600	2690	2150	435	1700	201	213
7	54	62	263	427	1520	3940	1890	3430	917	2450	308	113
8	52	54	256	1400	860	2240	1480	3480	2940	1700	316	98
9	51	56	240	1770	653	2700	1110	3890	1340	1200	247	91
10	49	88	167	2110	694	3230	997	4560	2190	750	132	88
11	48	199	120	1460	435	3200	667	3910	2450	480	82	88
12	45	169	143	1660	476	3080	424	2750	1300	330	73	89
13	43	157	166	2410	671	3010	364	1580	1290	220	76	171
14	42	152	170	2200	2030	3030	261	877	1660	355	76	782
15	43	141	168	3050	3120	2900	246	800	3130	372	73	1000
16	42	140	165	3150	3010	2750	237	1040	5040	327	59	2320
17	41	161	162	3100	1960	2560	237	1060	4080	287	65	2320
18	40	175	160	3110	2180	1410	254	961	3920	234	260	1890
19	38	212	161	2900	2410	849	235	348	3610	258	850	461
20	37	1910	160	2300	3180	490	227	513	3740	274	400	489
21	40	672	394	1320	5460	2170	217	1160	3830	292	200	397
22	46	1210	678	1030	3270	2100	200	1410	4000	297	100	530
23	41	1720	582	455	2220	2320	170	3710	3960	260	105	1200
24	44	1200	2690	326	3050	2260	169	2430	3880	220	125	2420
25	46	1110	2730	288	3460	2100	162	1690	3840	190	270	2200
26	44	540	1840	334	3400	1230	161	1370	3770	165	400	1750
27	44	537	2470	366	3260	1140	155	780	3900	145	350	1250
28	42	646	2290	280	3130	1100	193	1730	4150	125	325	900
29	43	604	1700	267	---	852	528	1600	3940	110	290	640
30	42	555	964	274	---	797	607	620	2640	95	270	430
31	42	---	674	305	---	596	---	485	---	150	280	---
TOTAL	1472	12775	21773	38112	57686	70214	20294	60644	77980	16689	7704	23523
MEAN	47.5	426	702	1229	2060	2265	676	1956	2599	538	249	784
MAX	68	1910	2730	3150	5460	6600	2860	4560	5040	2450	850	2420
MIN	37	41	120	169	295	490	155	348	309	95	59	88
CFSM	.09	.79	1.31	2.29	3.84	4.22	1.26	3.64	4.84	1.00	.46	1.46
IN.	.10	.88	1.51	2.64	4.00	4.86	1.41	4.20	5.40	1.16	.53	1.63

CAL YR 1988 TOTAL 116513 MEAN 318 MAX 2910 MIN 15 CFSM .59 IN. 8.07
WTR YR 1989 TOTAL 408866 MEAN 1120 MAX 6600 MIN 37 CFSM 2.09 IN. 28.32

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-75, 1978-1983. April 1987 to current year.
WATER TEMPERATURES: October 1963 to September 1975.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: August 1979 to August 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 1988												
18...	1320	36	306	7.50	19.0	14.0	8.1	81	120	69	28	12
NOV												
15...	0900	145	301	7.40	7.0	8.0	10.2	88	120	66	28	12
DEC												
20...	0830	166	324	7.60	10.0	3.0	12.3	94	130	83	31	13
JAN 1989												
11...	1315	1540	204	7.40	5.0	7.5	11.3	96	81	54	18	8.6
13...	1420	2190	136	7.46	17.0	7.0	9.7	80	55	34	12	6.0
18...	0815	3130	154	7.20	5.5	5.5	11.7	95	63	45	14	6.7
FEB												
15...	0900	3460	109	7.10	11.0	7.0	11.4	96	41	27	8.5	4.7
23...	0900	2450	180	7.00	-4.0	3.5	11.5	88	70	51	14	8.4
MAR												
07...	0830	1850	126	6.90	-1.0	5.5	11.3	92	46	33	9.5	5.5
21...	0830	2410	177	7.06	5.0	8.5	9.6	84	65	44	14	7.3
APR												
17...	1430	256	184	7.70	28.0	12.5	10.3	99	72	47	15	8.3
MAY												
09...	1915	4620	166	6.99	14.5	13.0	9.5	93	61	38	14	6.4
15...	1715	808	163	6.95	19.0	14.0	9.5	95	63	42	14	6.9
23...	1545	3700	130	7.16	23.0	15.0	9.2	95	51	33	11	5.7
JUN												
16...	1000	5100	124	7.22	22.0	18.5	8.3	91	52	31	12	5.4
22...	1345	4240	134	7.15	30.0	23.0	8.7	105	51	31	13	4.5
JUL												
13...	1445	223	272	7.21	30.5	25.5	6.9	88	110	65	26	11
AUG												
24...	1300	129	239	7.19	27.0	22.5	7.0	84	96	46	23	9.4
SEP												
21...	0900	370	306	7.24	18.5	21.5	7.4	87	130	72	31	13

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA- LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 1988											
18...	12	18	0.5	2.7	52	63	51	77	8.2	0.010	2.9
NOV											
15...	11	16	0.5	2.5	53	65	54	72	7.9	0.020	2.7
DEC											
20...	9.1	13	0.4	2.8	48	58	48	82	8.0	0.025	4.7
JAN 1989											
11...	5.1	12	0.3	2.0	25	31	27	60	4.1	0.020	5.6
13...	2.8	10	0.2	1.7	21	26	21	41	2.5	<0.010	6.6
18...	2.9	9	0.2	1.8	17	21	18	45	2.6	<0.010	5.9
FEB											
15...	2.5	11	0.2	1.5	14	17	14	30	2.2	0.010	6.4
23...	3.3	9	0.2	1.5	18	22	19	54	2.7	0.010	6.5
MAR											
07...	2.2	9	0.1	1.5	13	16	13	35	1.6	<0.010	6.5
21...	4.7	13	0.3	1.6	22	27	22	48	3.4	<0.010	6.7
APR											
17...	4.5	12	0.2	1.6	25	31	25	49	3.8	<0.030	6.8
MAY											
09...	3.8	12	0.2	1.7	23	28	23	43	2.0	0.020	6.2
15...	3.4	10	0.2	1.5	23	28	23	43	2.2	<0.010	6.6
23...	3.7	13	0.2	1.6	17	20	18	32	1.6	0.020	7.5
JUN											
16...	2.4	9	0.1	1.7	21	26	21	32	1.4	0.010	7.0
22...	2.2	8	0.1	1.9	20	25	22	31	1.5	0.030	5.6
JUL											
13...	6.9	12	0.3	2.4	44	54	43	73	4.2	<0.010	6.9
AUG											
24...	5.5	11	0.3	2.6	48	58	47	53	3.9	<0.010	6.7
SEP											
21...	11	15	0.4	2.2	62	76	62	82	5.0	<0.010	5.9

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 1988											
18...	186	174	0.25	18.3	--	<0.01	<0.01	<0.10	0.3	0.02	<0.01
NOV											
15...	175	169	0.24	68.5	0.11	0.01	0.04	0.12	0.5	0.02	<0.01
DEC											
20...	184	181	0.25	82.5	--	<0.01	0.02	0.36	0.3	0.02	<0.01
JAN 1989											
11...	125	121	0.17	520	--	<0.01	0.06	0.29	0.6	0.04	<0.01
13...	78	87	0.11	461	--	<0.01	0.02	0.29	0.3	0.02	0.02
18...	95	91	0.13	803	--	<0.01	0.04	0.30	0.4	0.02	<0.01
FEB											
15..	65	66	0.09	607	0.22	0.02	<0.01	0.24	0.6	0.10	<0.01
23...	90	103	0.12	595	--	<0.01	<0.01	0.28	0.4	0.04	<0.01
MAR											
07...	77	71	0.10	385	--	<0.01	<0.01	0.22	0.3	0.02	<0.01
21...	104	100	0.14	677	0.19	0.03	0.02	0.22	0.5	0.15	0.01
APR											
17...	104	105	0.14	71.9	--	<0.01	0.01	0.17	<0.2	0.02	<0.01
MAY											
09...	105	93	0.14	1310	--	<0.01	0.02	0.38	0.7	0.07	<0.01
15...	80	92	0.11	175	--	<0.01	0.02	0.18	<0.2	0.02	<0.01
23...	63	75	0.09	629	--	<0.01	0.02	0.14	0.5	0.03	<0.01
JUN											
16...	72	76	0.10	991	--	<0.01	0.01	0.18	0.3	0.03	<0.01
22...	93	73	0.13	1060	--	<0.01	0.02	0.18	0.6	0.05	0.02
JUL											
13...	161	160	0.22	96.9	--	<0.01	0.03	0.28	0.2	0.02	<0.01
AUG											
24...	135	135	0.18	47.0	--	<0.01	0.05	0.20	0.5	0.09	<0.01
SEP											
21...	176	187	0.24	176	--	<0.01	0.05	0.21	0.4	<0.01	<0.01

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
18...	0.02	10	<1	41	<0.5	20	<0.1	0.6	<3	3.1	54
NOV											
15...	0.02	<10	<1	41	<0.5	10	0.7	<0.5	<3	<0.5	39
DEC											
20...	0.02	10	<1	40	<0.5	10	<0.1	<0.5	<3	1.3	51
JAN 1989											
11...	0.04	<10	<1	28	<0.5	<10	0.1	<0.5	<3	0.7	24
13...	0.02	70	<1	20	<0.5	<10	<0.1	<0.5	<3	0.8	79
18...	0.02	10	<1	24	<0.5	<10	<1.0	<5	<3	<10	31
FEB											
15...	0.10	60	<1	17	<0.5	<10	<0.1	<0.5	<3	0.9	98
23...	0.04	20	<1	23	<0.5	<10	0.2	0.9	<3	1.1	26
MAR											
07...	0.02	30	<1	16	<0.5	<10	0.2	<0.5	<3	0.8	59
21...	0.15	40	<1	22	<0.5	<10	0.3	<0.5	<3	1.1	69
APR											
17...	0.02	<10	<1	27	<0.5	<10	<0.2	<0.5	<3	<0.5	91
MAY											
09...	0.07	50	<1	21	<0.5	<10	0.4	<0.5	<3	2.0	110
15...	0.02	10	<1	24	<0.5	10	<0.1	<0.5	<3	2.5	29
23...	0.03	50	<1	19	<0.5	<10	0.2	<0.5	<3	0.7	76
JUN											
16...	0.03	40	<1	18	<0.5	10	<0.1	0.6	<3	1.1	81
22...	0.05	100	<1	20	<0.5	20	0.2	<0.5	<3	1.2	170
JUL											
13...	0.02	10	<1	38	<0.5	10	0.3	<0.5	<3	0.8	17
AUG											
24	0.09	30	<1	33	<0.5	40	0.2	<0.5	<3	0.7	49
SEP											
21...	--	20	<1	42	<0.5	20	0.2	<0.5	<3	<0.5	45

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
18...	<0.5	7	48	<10	<10	<1.0	220	<6	23	2.4	0.2
NOV											
15...	<0.5	6	37	<10	<10	2.0	210	<6	10	1.8	0.2
DEC											
20.	<0.5	7	89	<10	<10	<1.0	210	<6	4	1.6	0.2
JAN 1989											
11...	<0.5	<4	120	<10	<10	<1.0	120	<6	14	1.6	0.8
13...	<0.5	<4	42	<10	<10	1.0	68	<6	6	2.4	0.9
18...	<10	<4	60	<10	10	2.0	85	<6	9	2.0	0.9
FEB											
15...	<0.5	<4	26	<10	<10	<1.0	47	<6	16	2.8	2.1
23...	<0.5	<4	52	<10	<10	<1.0	83	<6	5	2.7	0.8
MAR											
07...	<0.5	<4	36	<10	<10	<1.0	54	<6	23	1.9	1.0
21...	5.5	<4	78	<10	<10	<1.0	95	<6	6	2.2	1.7
APR											
17...	<0.5	<4	110	<10	<10	3.0	100	<6	8	1.4	0.2
MAY											
09...	0.6	<4	24	<10	<10	<1.0	92	<6	3	2.0	1.3
15...	<0.5	<4	44	<10	<10	<1.0	89	<6	3	1.6	0.2
23...	<0.5	<4	18	<10	<10	1.0	74	<6	3	3.0	>2.0
JUN											
16...	<0.5	<4	21	<10	<10	2.0	66	<6	<3	3.3	>2.5
22...	<0.5	12	21	<10	<10	8.0	68	<6	22	5.3	0.8
JUL											
13...	<0.5	<4	85	<10	<10	<1.0	180	<6	19	2.3	0.4
AUG											
24...	<0.5	4	120	<10	<10	<1.0	140	<6	21	3.0	--
SEP											
21...	<0.5	<4	130	<10	<10	<1.0	230	<6	6	3.0	0.3

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	FLUORIDE, DISSOLVED (MG/L AS F)	ANTIMONY, DISSOLVED (UG/L AS SB)	SELENIUM, DISSOLVED (UG/L AS SE)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DISSOLVED (MG/L AS CN)
OCT 1988											
18...	1320	0.10	<1	<1	<0.4	<0.4	4.0	<0.4	3.1	<0.4	<0.01
JAN 1989											
11...	1315	<0.10	<1	<1	0.4	6.1	2.4	4.3	1.9	3.9	<0.01
13...	1420	0.10	<1	<1	<0.4	1.4	1.7	2.4	1.5	2.2	<0.01
18...	0815	0.10	<1	<1	<0.4	3.8	2.2	3.2	1.8	2.9	<0.01
FEB											
15...	0900	0.10	<1	<1	<0.4	16	1.6	11	1.5	10	<0.01
MAR											
07...	0830	0.10	<1	<1	<0.4	6.4	1.9	4.9	1.7	4.3	<0.01
APR											
17...	1430	0.10	<1	<1	<0.4	<0.4	2.0	<0.4	1.7	<0.4	<0.01
MAY											
09...	1915	0.10	<1	<1	<0.4	9.1	1.7	6.7	1.5	6.0	<0.01
23...	1545	0.10	<1	1	<0.4	12	2.9	10	2.2	9.0	<0.01
JUN											
16...	1000	0.10	<1	<1	0.4	13	2.2	12	1.9	11	<0.01
JUL											
13...	1445	0.10	<1	<1	<0.4	1.0	2.7	1.0	2.0	1.0	<0.01

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JAN 1989								
11...	1315	1600	100	<10	40	<1	3	<10
13...	1420	1400	<100	<10	10	1	4	<10
FEB								
15...	0900	3600	<100	<10	30	<1	7	10
MAR								
07...	0830	2200	<100	<10	<10	1	3	<10
MAY								
09...	1915	4100	200	<10	190	<1	6	10
23...	1545	2800	<100	<10	<10	<1	4	<10
JUN								
16...	1000	5800	<100	<10	50	<1	10	11

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
JAN 1989							
11...	3300	<5	240	3	3	<1	<10
13...	2900	<5	160	4	4	<1	20
FEB							
15...	8400	5	290	4	9	<1	40
MAR							
07...	4400	<5	140	4	4	<1	30
MAY							
09...	7400	6	230	3	8	<1	30
23...	6700	8	230	3	9	<1	40
JUN							
16...	13000	8	420	<1	11	<1	40

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	0820	7.5	6.0	305	8.26	680	14	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	<0.1	<0.1	<0.1	<0.1	<5.0	<0.1	<0.1	<1.0	<1.0	<1.0	<1.0	<1.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARA-CHLORO-META CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY--Continued

(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORO-NAPH-THALENE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHAL-ATE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	3,3'-DI-CHLORO-BENZI-DINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO -ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	BENZI-DINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	79000	<250	<2500	<250	<250

03281040 RED BIRD RIVER NEAR BIG CREEK, KY

LOCATION.--Lat 37°10'43", long 83°35'35" Clay County, Hydrologic Unit 05100203, on right bank adjacent to State Highway 66, 0.1 mi upstream from Fish Trap Branch, 0.6 mi downstream from Britton Branch, 1.2 mi downstream from Big Creek, 1.7 mi northwest of Big Creek, and at mile 58.9.

DRAINAGE AREA.--155 mi^2.

PERIOD OF RECORD.--August 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 815.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--17 years, 267 ft^3/s, 23.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,500 ft^3/s, June 16, 1989, gage height, 19.82 ft; minimum daily, 0.20 ft^3/s, Oct. 4, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1947 and 1957 reached a stage of 29.27 ft and 27.60 ft, respectively, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	2300	6,800	9.50	Mar. 6	0900	14,500	14.45
Feb. 21	1130	10,400	12.03	June 16	0200	*25,500	*19.82

Minimum daily discharge, 3.1 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	60	157	221	107	236	247	710	94	843	91	68
2	8.2	57	108	179	103	217	232	739	86	502	111	103
3	7.3	52	83	155	259	206	274	447	83	304	49	61
4	6.3	47	71	135	810	193	1740	327	105	382	29	38
5	5.3	201	58	110	531	783	1180	1360	91	830	22	25
6	4.9	262	50	228	399	8720	636	2890	204	776	71	18
7	4.1	139	46	398	320	1510	472	1370	498	555	75	15
8	3.4	88	43	759	259	755	404	714	280	454	38	14
9	3.4	60	40	692	211	515	375	522	675	442	23	11
10	3.1	101	35	448	172	398	332	471	541	262	16	9.3
11	6.4	156	31	344	173	330	299	391	299	179	13	18
12	7.3	90	25	3060	156	283	264	327	298	134	11	12
13	7.2	65	21	3020	149	266	236	269	1270	104	9.7	9.6
14	7.0	50	23	993	1300	263	208	223	553	91	8.5	9.8
15	7.6	38	24	2570	1530	242	247	259	7200	67	8.5	97
16	9.2	41	24	1030	1050	210	244	240	11200	53	32	330
17	11	150	21	567	933	184	231	208	1810	43	24	133
18	12	134	18	401	657	178	225	172	802	35	16	64
19	13	99	17	311	500	167	211	146	492	30	12	39
20	13	1170	16	254	790	168	193	358	369	31	13	28
21	19	526	179	208	6770	1050	171	428	278	31	15	22
22	29	240	506	175	1740	904	153	308	249	26	14	85
23	44	149	1010	152	822	574	140	348	274	22	13	627
24	61	101	1990	134	514	536	131	310	662	19	202	386
25	54	76	1390	116	396	456	120	242	301	17	81	202
26	51	62	491	105	345	389	108	221	203	15	38	215
27	49	144	315	98	298	327	99	628	157	15	28	184
28	50	531	304	85	265	282	95	373	413	22	24	121
29	52	352	335	77	---	252	164	249	281	27	16	88
30	53	233	296	95	---	239	247	178	182	36	85	84
31	60	---	252	114	---	254	---	126	---	67	95	---
TOTAL	671.1	5474	7979	17234	21559	21087	9678	15554	29950	6414	1283.7	3116.7
MEAN	21.6	182	257	556	770	680	323	502	998	207	41.4	104
MAX	61	1170	1990	3060	6770	8720	1740	2890	11200	843	202	627
MIN	3.1	38	16	77	103	167	95	126	83	15	8.5	9.3
CFSM	.14	1.18	1.66	3.59	4.97	4.39	2.08	3.24	6.44	1.33	.27	.67
IN.	.16	1.31	1.91	4.14	5.17	5.06	2.32	3.73	7.19	1.54	.31	.75

CAL YR 1988 TOTAL 43729.12 MEAN 119 MAX 3330 MIN .26 CFSM .77 IN. 10.49
WTR YR 1989 TOTAL 140000.5 MEAN 384 MAX 11200 MIN 3.1 CFSM 2.47 IN. 33.60

03281100 GOOSE CREEK AT MANCHESTER, KY

LOCATION.--Lat 37°09'07", long 83°45'37", Clay County, Hydrologic Unit 05100203, on left bank on downstream side of Second Street bridge at Manchester, 0.9 mi upstream from Little Goose Creek, and at mile 21.7.

DRAINAGE AREA.--163 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 819.37 ft above National Geodetic Vertical Datum of 1929. Prior to September 15, 1975, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: June 16 to July 11. Records good except those for estimated discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--25 years, 259 ft^3/s, 21.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,200 ft^3/s, May 7, 1984, gage height, 32.85 ft; no flow Oct. 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1947, Jan. 29, 1957, and Mar. 12, 1963, reached a stage of 40.6 ft, discharge, 38,000 ft^3/s, 37.3 ft, discharge, 29,800 ft^3/s, and 33.5 ft, discharge, 21,500 ft^3/s, respectively, present site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0300	5,060	18.10	Mar. 6	1400	8,760	23.24
Feb. 21	1600	7,100	20.92	June 16	Unknown	*Unknown	*Unknown

Minimum daily discharge, 2.6 ft^3/s, Oct. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	193	256	104	205	269	326	78	1000	137	118
2	16	14	142	201	99	180	255	525	67	550	321	244
3	14	12	112	171	235	173	332	342	67	350	107	134
4	12	12	95	148	803	164	1180	250	83	500	62	81
5	10	255	79	124	574	1250	1160	474	90	1000	44	55
6	7.8	404	69	283	429	7010	628	1800	151	840	161	39
7	6.7	208	62	538	325	1780	463	1120	318	600	118	31
8	5.9	129	56	693	254	687	391	608	211	520	66	26
9	5.2	87	52	693	204	480	328	458	778	490	42	21
10	4.6	149	50	486	171	377	266	426	838	300	31	18
11	4.3	272	45	376	170	304	236	338	384	220	23	17
12	3.5	150	40	2060	153	258	212	278	293	163	19	17
13	2.7	106	36	3480	154	239	190	228	2200	130	16	18
14	2.6	76	37	980	840	224	170	189	985	108	14	17
15	2.6	60	37	2060	1500	198	207	217	1960	82	12	48
16	2.7	65	34	1030	1010	170	197	195	13000	66	11	223
17	3.9	198	31	576	941	150	186	162	2500	55	14	153
18	4.3	179	28	411	696	149	179	138	880	46	12	87
19	3.3	143	27	303	550	138	170	119	540	39	18	57
20	3.4	1410	25	236	698	149	156	308	400	53	28	42
21	8.0	855	282	190	5720	1150	142	406	300	47	21	33
22	10	322	744	159	2190	1080	128	282	250	42	14	372
23	9.3	199	1150	142	766	603	117	341	300	33	26	981
24	27	141	1920	128	493	488	114	296	800	26	257	538
25	19	106	1610	114	384	396	105	218	350	21	103	309
26	17	86	575	105	332	327	93	171	240	19	194	304
27	14	171	362	100	279	276	84	250	170	15	152	248
28	15	605	396	86	242	240	80	220	500	14	89	186
29	17	452	487	81	---	210	113	161	320	19	55	147
30	26	280	408	101	---	212	143	123	200	39	136	170
31	20	---	312	112	---	260	---	96	---	93	122	---
TOTAL	315.8	7163	9496	16423	20316	19527	8294	11065	29253	7480	2425	4734
MEAN	10.2	239	306	530	726	630	276	357	975	241	78.2	158
MAX	27	1410	1920	3480	5720	7010	1180	1800	13000	1000	321	981
MIN	2.6	12	25	81	99	138	80	96	67	14	11	17
CFSM	.06	1.46	1.88	3.25	4.45	3.86	1.70	2.19	5.98	1.48	.48	.97
IN.	.07	1.63	2.17	3.75	4.64	4.46	1.89	2.53	6.68	1.71	.55	1.08

CAL YR 1988 TOTAL 49769.58 MEAN 136 MAX 3560 MIN .07 CFSM .83 IN. 11.36
WTR YR 1989 TOTAL 136491.8 MEAN 374 MAX 13000 MIN 2.6 CFSM 2.29 IN. 31.15

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY

LOCATION.--Lat 37°27'45", long 83°40'38", Owsley County, Hydrologic Unit 05100203, on right bank 600 ft downstream from Buck Creek, 0.2 mi downstream from bridge on State Highway 30 at Booneville, 0.5 mi downstream from Meadow Creek, and at mile 11.5.

DRAINAGE AREA.--722 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1925 to September 1931, October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1305.

REVISED RECORDS.--WSP 893: 1929(M). WSP 1335: WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 642.49 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 5, 1925, nonrecording gage at site 0.1 mi upstream from Meadow Creek and Aug. 5, 1925, to Sept. 30, 1929, nonrecording gage on highway bridge 0.1 mi upstream from Meadow Creek, at datum 3.07 ft higher. Oct. 1 to Nov. 27, 1929, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharge: Nov. 20, 21, Jan 9, 12-16, Feb. 4, 5, 16, 17, 21-23, Mar. 5-7, 21, Apr. 4-6, May 6-10, Aug. 29 to Sept. 21, 23-26. Records fair except those for Aug. 29 to Sept. 21, 23-26 which are poor.

AVERAGE DISCHARGE.--56 years, (Water years 1926-31, 1940-89), 1,042 ft^3/s, 19.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 66,100 ft^3/s, Jan. 30, 1957, from rating curve extended above 35,000 ft^3/s, on basis of slope-area measurement of peak flow; maximum gage height, 43.40 ft, Jan. 30, 1957; no flow Oct. 11-28, Nov. 3-14, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 14,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 7	Unknown	*26,200	*32.54	June 17	0400	25,700	31.80

Minimum daily discharge, 13 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	63	795	1290	457	719	1190	904	449	1030	623	270
2	86	65	590	1110	432	598	1080	2270	378	1440	487	335
3	72	65	455	923	1050	545	1270	1780	375	995	538	370
4	59	60	381	809	3150	510	2550	1220	393	790	316	340
5	51	143	327	684	3030	3020	4180	1170	365	1030	218	270
6	45	691	285	872	1860	14000	3290	4700	1030	1710	235	220
7	39	833	253	1960	1310	19700	2230	5430	1060	4120	646	190
8	35	528	231	2870	990	4750	1790	3280	1100	2260	457	180
9	31	379	215	3370	761	2180	1600	2360	1350	2120	293	160
10	27	352	202	2560	615	1500	1320	2910	2950	1650	206	150
11	24	539	192	1840	575	1150	1140	2030	1670	980	156	160
12	22	654	175	3030	534	922	994	1560	1100	948	126	180
13	20	448	163	10400	604	823	881	1250	4070	631	107	165
14	18	343	153	4760	3010	920	783	1020	4910	485	96	180
15	16	276	149	5000	8370	807	808	923	4370	401	85	680
16	16	227	147	5390	7300	679	899	1080	16400	328	79	3100
17	16	248	142	3060	5290	576	819	862	20300	272	163	3000
18	16	530	135	1930	3350	533	779	728	4680	230	1260	2000
19	14	543	126	1400	2390	506	751	625	2080	203	372	900
20	13	4410	120	1060	2060	465	699	748	1530	380	193	340
21	14	5030	401	838	9030	4990	632	1420	1390	564	141	370
22	17	1820	2680	680	7250	6130	577	1290	1150	365	146	367
23	20	914	2540	586	4060	3370	526	5750	1130	254	207	2400
24	36	625	7010	523	2390	2510	491	3170	1240	236	225	2700
25	79	468	11300	468	1600	2030	493	1700	1120	180	462	1500
26	106	379	4060	425	1290	1680	449	1210	756	150	406	1200
27	104	403	2030	408	1080	1400	416	1260	572	131	287	1040
28	80	1060	1670	379	885	1170	453	1350	1000	121	259	800
29	70	1830	2270	343	---	1010	563	968	1440	116	150	656
30	63	1160	1960	357	---	938	709	726	932	106	240	594
31	60	---	1550	447	---	1070	---	565	---	269	250	---
TOTAL	1375	25086	42707	59772	74723	81201	34362	56259	81290	24495	9429	24817
MEAN	44.4	836	1378	1928	2669	2619	1145	1815	2710	790	304	827
MAX	106	5030	11300	10400	9030	19700	4180	5750	20300	4120	1260	3100
MIN	13	60	120	343	432	465	416	565	365	106	79	150
CFSM	.06	1.16	1.91	2.67	3.70	3.63	1.59	2.51	3.75	1.09	.42	1.15
IN.	.07	1.29	2.20	3.08	3.85	4.18	1.77	2.90	4.19	1.26	.49	1.28

CAL YR 1988 TOTAL 200805.5 MEAN 549 MAX 11300 MIN 4.3 CFSM .76 IN. 10.35
WTR YR 1989 TOTAL 515516 MEAN 1412 MAX 20300 MIN 13 CFSM 1.96 IN. 26.56

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950 to 1975, 1979 to September 1983, and April 1987 to current year.
WATER TEMPERATURE.--Water years 1969-1976.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: August 1979 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 1988												
18...	0900	16	265	7.30	21.0	14.0	8.4	84	120	75	28	13
NOV												
15...	1230	270	275	7.50	20.0	9.0	10.1	90	100	59	22	11
DEC												
20...	1315	117	386	7.60	18.0	3.5	13.0	101	130	86	29	14
JAN 1989												
13...	0900	12500	121	6.56	3.0	6.5	8.4	69	41	25	8.8	4.5
18...	1315	1790	168	7.10	13.0	5.0	12.0	97	63	46	13	7.5
FEB												
14...	1815	4340	138	6.83	8.0	6.0	11.4	93	49	42	10	5.9
23...	1315	4040	145	6.50	-4.5	4.0	11.6	90	54	39	11	6.3
MAR												
07...	1330	16500	100	6.80	2.0	7.0	11.0	93	36	25	7.9	4.0
21...	1245	6690	130	6.93	6.0	9.0	9.1	81	47	33	9.7	5.4
APR												
17...	0900	818	212	7.39	14.5	11.5	10.5	99	78	53	16	9.2
MAY												
10...	1515	2740	136	7.12	18.0	12.5	9.2	89	49	31	10	5.8
15...	1400	923	182	7.18	22.0	14.5	9.7	98	66	42	14	7.5
23...	1930	5030	122	7.05	22.0	15.0	8.8	90	44	26	9.5	4.8
JUN												
15...	1530	4900	118	8.19	20.0	19.0	8.4	94	46	27	9.9	5.1
22...	0845	1150	199	7.20	25.5	23.0	8.3	100	77	49	17	8.4
JUL												
13...	0945	627	187	7.06	26.0	24.0	7.8	97	72	41	16	7.7
AUG												
24...	0900	219	294	7.25	24.5	24.0	7.3	90	100	54	23	11
SEP												
21...	1230	372	211	7.04	31.5	22.5	7.8	93	83	43	19	8.6

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 1988											
18...	18	23	0.7	3.3	50	61	49	79	17	0.050	5.2
NOV											
15...	12	20	0.5	2.8	41	50	42	69	10	0.030	6.4
DEC											
20...	21	26	0.8	1.8	44	54	45	95	21	0.093	4.5
JAN 1989											
13...	2.6	12	0.2	1.7	16	13	16	33	2.1	0.025	6.5
18...	5.1	15	0.3	1.6	17	21	18	50	3.7	0.011	7.3
FEB											
14...	4.4	16	0.3	1.4	8	10	7	38	4.6	0.012	6.5
23...	3.7	13	0.2	1.4	14	17	15	42	2.4	0.012	6.7
MAR											
07...	2.1	11	0.2	1.5	11	13	12	28	1.6	<0.010	6.0
21...	3.5	14	0.2	1.5	13	16	14	37	2.3	<0.010	6.5
APR											
17...	7.7	17	0.4	1.7	28	34	28	62	4.6	<0.020	5.6
MAY											
10...	3.9	14	0.2	1.5	19	23	20	35	2.2	<0.010	7.3
15...	6.8	18	0.4	1.4	22	26	22	48	3.7	0.020	6.5
23...	3.3	14	0.2	1.5	17	21	17	29	2.1	0.020	7.2
JUN											
15...	3.3	13	0.2	1.4	16	20	18	29	1.9	0.010	8.1
22...	6.0	14	0.3	1.8	30	36	29	57	3.9	0.020	8.2
JUL											
13...	6.2	15	0.3	1.9	37	45	36	46	4.5	0.020	8.7
AUG											
24...	15	23	0.7	2.8	55	67	52	60	15	0.060	5.6
SEP											
21...	7.7	16	0.4	2.2	41	50	40	50	5.4	0.020	8.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
18...	203	195	0.28	8.82	--	<0.01	<0.01	0.36	0.4	0.02	<0.01
NOV											
15...	162	161	0.22	118	--	<0.01	0.03	0.41	0.3	0.03	<0.01
DEC											
20...	216	216	0.29	68.2	0.42	0.01	0.03	0.43	<0.2	0.01	<0.01
JAN 1989											
13...	66	70	0.09	2230	--	<0.01	0.03	0.24	0.6	0.18	<0.01
18...	88	101	0.12	425	--	<0.01	0.02	0.41	<0.2	0.01	<0.01
FEB											
14...	89	77	0.12	1040	0.30	0.02	0.04	0.32	0.3	0.12	0.03
23...	81	84	0.11	884	--	<0.01	<0.01	0.35	0.7	0.04	<0.01
MAR											
07...	67	59	0.09	2980	0.19	0.01	0.02	0.20	0.5	0.16	<0.01
21...	73	76	0.10	1320	--	<0.01	0.03	0.18	0.5	0.12	0.01
APR											
17...	123	123	0.17	272	--	<0.01	<0.01	0.14	0.2	0.01	<0.01
MAY											
10...	69	70	0.09	510	--	<0.01	<0.01	0.13	<0.2	0.02	<0.01
15...	104	103	0.14	259	--	<0.01	0.01	0.14	0.3	0.02	<0.01
23...	74	70	0.10	1000	--	<0.01	<0.01	0.24	<0.2	0.03	<0.01
JUN											
15...	73	72	0.10	966	--	<0.01	0.02	0.26	0.3	0.02	0.01
22...	130	121	0.18	404	--	<0.01	0.02	0.36	<0.2	<0.01	<0.01
JUL											
13...	105	111	0.14	178	--	<0.01	0.04	0.29	0.2	0.02	<0.01
AUG											
24...	160	162	0.22	94.6	--	<0.01	0.02	<0.10	0.4	0.06	<0.01
SEP											
21...	135	127	0.18	136	--	<0.01	0.03	0.37	0.3	0.01	<0.01

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
18...	0.02	<10	<1	50	<0.5	20	<0.1	0.6	<3	1.4	74
NOV											
15...	0.03	30	<1	37	<0.5	20	0.1	<0.5	<3	<0.5	74
DEC											
20...	0.01	10	<1	51	<0.5	20	<0.1	<0.5	<3	0.9	30
JAN 1989											
13...	0.18	100	<1	18	<0.5	<10	0.2	0.9	<3	1.0	150
18...	0.01	30	<1	25	<0.5	<10	<0.1	<0.5	<3	0.6	55
FEB											
14...	0.12	120	<1	17	<0.5	<10	0.1	1.1	<3	1.6	73
23...	0.04	30	<1	22	<0.5	<10	0.2	<0.5	<3	0.9	39
MAR											
07...	0.16	20	<1	16	<0.5	<10	0.3	<0.5	<3	1.1	75
21...	0.12	80	<1	17	<0.5	10	0.2	<0.5	<3	1.0	130
APR											
17...	0.01	10	<1	28	<0.5	10	<0.2	<0.5	<3	<0.5	37
MAY											
10...	0.02	20	<1	19	<0.5	<10	0.1	<0.5	<3	1.6	29
15...	0.02	10	<1	26	<0.5	20	<0.1	<0.5	<3	0.7	39
23...	0.03	50	<1	16	<0.5	20	<0.1	<0.5	<3	0.5	76
JUN											
15...	0.02	40	<1	16	<0.5	30	<0.1	<0.5	<3	0.7	38
22...	--	20	<1	30	<0.5	<10	<0.1	<0.5	<3	0.9	47
JUL											
13...	0.02	110	<1	25	<0.5	10	<0.1	<0.5	<3	<0.5	87
AUG											
24...	0.06	20	<1	38	<0.5	10	0.2	<0.5	<3	0.9	17
SEP											
21...	0.01	20	<1	31	<0.5	20	0.4	<0.5	<3	0.8	76

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
18...	<0.5	4	100	<10	<10	<1.0	240	<6	4	2.7	0.2
NOV											
15...	<0.5	5	41	<10	<10	<1.0	170	<6	5	1.6	0.1
DEC											
20...	<0.5	8	150	<10	<10	<1.0	250	<6	4	1.1	0.2
JAN 1989											
13...	0.5	<4	93	<10	<10	<1.0	59	<6	<3	2.4	>2.7
18...	<0.5	<4	100	<10	<10	<1.0	110	<6	36	1.2	0.3
FEB											
14...	<0.5	<4	90	<10	<10	<1.0	72	<6	12	2.1	2.0
23...	<0.5	<4	97	<10	<10	<1.0	83	<6	6	1.9	0.9
MAR											
07...	<0.5	<4	98	<10	<10	<1.0	50	<6	19	2.2	2.2
21...	0.5	<4	84	<10	<10	1.0	67	<6	4	2.1	>2.4
APR											
17...	<0.5	<4	84	<10	10	3.0	150	<6	7	1.3	0.1
MAY											
10...	<0.5	<4	41	<10	<10	5.0	78	<6	<3	1.3	0.2
15...	<0.5	<4	58	<10	<10	<1.0	120	<6	6	1.2	0.2
23...	<0.5	<4	24	<10	<10	<1.0	65	<6	<3	2.6	>2.0
JUN											
15...	<0.5	<4	19	<10	<10	<1.0	64	<6	8	1.9	1.2
22...	<0.5	11	68	<10	<10	4.0	140	<6	9	1.8	0.2
JUL											
13...	<0.5	<4	49	<10	<10	2.0	120	<6	6	2.3	0.2
AUG											
24...	<0.5	<4	25	<10	<10	<1.0	190	<6	6	2.7	0.2
SEP											
21...	<0.5	<4	97	<10	<10	<1.0	130	<6	5	2.6	0.4

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988											
18...	0900	0.10	<1	<1	<0.4	<0.4	4.1	<0.4	3.1	<0.4	<0.01
JAN 1989											
13...	0900	0.10	<1	2	<0.4	22	3.0	25	2.7	22	<0.01
18...	1315	0.10	<1	<1	<0.4	<0.4	1.4	0.6	1.2	0.6	<0.01
FEB											
14...	1815	0.10	<1	<1	<0.4	9.8	1.7	7.2	1.5	6.5	<0.01
MAR											
07...	1330	0.10	<1	<1	<0.4	7.1	1.7	8.6	1.6	8.1	<0.01
APR											
17...	0900	0.10	<1	<1	<0.4	0.4	2.4	0.7	2.0	0.8	<0.01
MAY											
10...	1515	0.10	<1	<1	<0.4	1.1	1.7	1.2	1.5	1.1	<0.01
23...	1930	0.10	<1	<1	<0.4	13	1.7	12	1.6	10	<0.01
JUN											
15...	1530	0.10	<1	<1	0.5	5.2	1.5	4.0	1.4	3.5	<0.01
JUL											
13...	0945	0.10	<1	<1	<0.4	1.7	1.7	2.0	1.5	1.9	<0.01

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
JAN 1989								
13...	0900	5800	100	<10	20	<1	10	10
FEB								
14...	1815	3200	<100	<10	40	<1	4	10
MAR								
07...	1330	4100	100	<10	30	<1	6	10
MAY								
10...	1515	460	100	<10	20	<1	2	<10
23...	1930	3600	100	<10	<10	<1	6	<10
JUN								
15...	1530	2100	<100	<10	50	<1	1	<10

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
JAN 1989							
13...	7900	5	710	2	20	<1	60
FEB							
14...	6900	<5	360	4	10	<1	40
MAR							
07...	8500	9	380	3	10	1	40
MAY							
10...	910	2	80	3	4	<1	20
23...	8300	8	360	3	13	<1	40
JUN							
15...	3900	3	160	<1	5	<1	20

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	0950	9.5	12.5	275	8.31	100	11	<0.1	0.9	<0.1	<0.1	2.0

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	1.2	<0.1	<0.1	<0.1	<5.0	<0.1	<0.1	<1.0	<1.0	46.2	<1.0	<1.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRA-CENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORO-NAPH-THALENE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHAL-ATE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	3,3'-DI-CHLORO-BENZI-DINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	BENZI-DINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	1700	<250	<2500	<250	<250

03282000 KENTUCKY RIVER AT LOCK 14, AT HEIDELBERG, KY

LOCATION.--Lat 37°33'19", long 83°46'06", Lee County, Hydrologic Unit 05100204, on right bank 200 ft upstream from lock 14 at Heidelberg, 0.3 mi upstream from Sturgeon Creek, and at mile 249.2.

DRAINAGE AREA.--2,657 mi^2.

PERIOD OF RECORD.--October 1925 to September 1931, December 1936 to February 1937, July 1938 to current year. Gage-height records collected in this vicinity since 1902 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 1385: 1926-27, 1928(M), 1929, 1931(M), 1937, 1939(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 626.66 ft Ohio River datum (U.S. Army Corps of Engineers bench mark). Prior to September 2, 1939, nonrecording gage at lock 14 at same datum.

REMARKS.--No estimated daily discharges. Records good above 1,000 ft^3/s, fair between 1,000 ft^3/s and 150 ft^3/s, poor below 150 ft^3/s. Flow regulated by Buckhorn Lake beginning December 1960 (station 03280800), and by Carr Fork Lake beginning January 1976 (station 03277446). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--57 years (Water years 1926-31, 1939-89), 3,606 ft^3/s, 18.43 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s, Feb. 4, 1939, gage height, 35.6 ft, from floodmark; minimum, 4.0 ft^3/s, Oct. 20, 1930; minimum gage height observed, 2.9 ft Nov. 22, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 56,300 ft^3/s, June 16, gage height, 22.92 ft; minimum, 119 ft^3/s, Oct. 16, 18-21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	275	2520	3650	2020	6640	4250	7110	2170	3470	1490	1060
2	394	265	1960	3240	1880	5970	4050	11700	1900	3370	1930	1150
3	346	258	1360	2880	8400	5490	4700	13800	1750	3410	2160	1410
4	302	253	1390	2440	13500	3900	8790	10200	1840	2770	1450	1290
5	270	424	1440	2000	11200	10100	17300	6770	1510	2510	1130	1070
6	245	1160	1200	2380	8720	40000	13600	13000	2430	3830	1290	791
7	222	1980	956	3920	6680	46600	9420	22900	3340	9140	2330	607
8	198	1550	891	5970	5020	29200	7260	18500	8470	6450	2150	500
9	183	1190	814	8620	3990	14200	6350	15000	6210	5380	1470	445
10	166	1210	740	8120	3300	10500	5570	20100	8040	4820	960	401
11	157	1570	609	6250	2800	9080	4630	16700	9560	2780	652	376
12	147	1690	562	8160	2580	7780	3840	11700	5490	2200	517	407
13	141	1380	558	25100	3410	7090	3320	7910	7770	1630	460	585
14	130	1080	552	23700	12400	7500	2920	5650	11600	1380	431	3090
15	126	882	555	17900	26300	7540	2840	4590	12500	1280	401	4890
16	125	766	549	20000	26500	6780	3110	5160	46600	1120	396	14300
17	126	808	521	14800	20600	6040	2980	5030	43700	955	563	12200
18	120	1160	516	10300	14500	4650	2770	4240	31800	816	3870	6810
19	120	2000	491	8090	11700	3730	2610	3170	19000	851	3140	3150
20	120	14300	480	6720	10700	3150	2430	2950	11300	1740	1600	2070
21	131	13600	1190	5000	31600	11900	2250	4580	9820	1720	1400	1650
22	164	6510	5450	3830	37400	18500	2090	5070	8420	1300	1080	2400
23	176	4350	5810	3040	24800	12900	1900	19300	8040	919	900	9600
24	237	3240	14800	2310	14100	9990	1770	12900	7550	846	1190	12700
25	355	2600	27400	1920	11200	8750	1680	7720	6810	782	4420	8510
26	508	1960	15700	1790	9730	6900	1590	5630	5940	664	2300	5220
27	483	1760	8650	1800	8440	5730	1520	4990	5530	568	1520	4430
28	395	2610	6800	1630	7410	5020	2040	5730	8330	541	1160	3920
29	355	3950	7290	1480	---	4360	4160	5080	8180	788	919	2970
30	317	3250	5830	1510	---	3940	4440	3380	5790	858	1040	2400
31	292	---	4460	1830	---	4040	---	2530	---	862	1030	---
TOTAL	7515	78031	122044	210380	340880	327970	136180	283090	311390	69750	45349	110412
MEAN	242	2601	3937	6786	12170	10580	4539	9132	10380	2250	1463	3680
MAX	508	14300	27400	25100	37400	46600	17300	22900	46600	9140	4420	14300
MIN	120	253	480	1480	1880	3150	1520	2530	1510	541	396	376

CAL YR 1988 TOTAL 662170 MEAN 1809 MAX 27400 MIN 45
WTR YR 1989 TOTAL 2042991 MEAN 5597 MAX 46600 MIN 120

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY

LOCATION.--Lat 37°38'22", long 83°47'05", Lee County, Hydrologic Unit 05100204, on left bank on downstream side of bridge on State Highway 52, 2.7 mi southeast of Crystal.

DRAINAGE AREA.--23.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1988 to March 1989, (discontinued).

GAGE.--Water-stage recorder. Datum of gage is approximately 643 ft above National Geodetic Vertical Datum of 1929 (from topographic map).

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 4, 27. Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,710 ft^3/s, Nov. 20, 1988, gage height, 10.70 ft; minimum daily discharge, 0.14 ft^3/s, July 9, 1988.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989: Maximum discharge, 3,710 ft^3/s, Nov. 20, gage height, 10.70 ft; minimum daily discharge, 1.7 ft^3/s, Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	3.7	21	41	26	30	---	---	---	---	---	---
2	5.6	3.6	17	34	24	26	---	---	---	---	---	---
3	4.6	3.5	15	30	1510	24	---	---	---	---	---	---
4	4.0	4.7	14	26	335	21	---	---	---	---	---	---
5	3.5	37	12	22	144	599	---	---	---	---	---	---
6	3.0	27	11	48	94	1090	---	---	---	---	---	---
7	2.7	24	11	40	67	232	---	---	---	---	---	---
8	2.5	18	10	45	51	126	---	---	---	---	---	---
9	2.4	13	9.3	34	38	98	---	---	---	---	---	---
10	2.2	45	8.8	28	33	79	---	---	---	---	---	---
11	2.1	36	8.4	25	31	74	---	---	---	---	---	---
12	2.0	23	7.0	152	28	67	---	---	---	---	---	---
13	1.9	19	7.6	135	187	82	---	---	---	---	---	---
14	1.8	15	8.4	91	713	89	---	---	---	---	---	---
15	1.8	12	8.9	112	1060	59	---	---	---	---	---	---
16	1.7	16	7.3	74	425	46	---	---	---	---	---	---
17	2.1	24	6.8	57	177	41	---	---	---	---	---	---
18	1.8	17	6.7	49	104	42	---	---	---	---	---	---
19	2.9	177	6.7	41	71	37	---	---	---	---	---	---
20	5.8	1430	7.0	33	89	46	---	---	---	---	---	---
21	10	172	98	26	975	218	---	---	---	---	---	---
22	12	81	74	23	185	117	---	---	---	---	---	---
23	9.0	51	86	20	111	85	---	---	---	---	---	---
24	11	36	479	18	69	72	---	---	---	---	---	---
25	9.2	27	177	17	60	54	---	---	---	---	---	---
26	6.0	22	83	16	57	45	---	---	---	---	---	---
27	5.0	36	58	16	48	37	---	---	---	---	---	---
28	5.1	39	76	13	38	32	---	---	---	---	---	---
29	5.4	28	63	13	---	30	---	---	---	---	---	---
30	4.3	25	53	37	---	33	---	---	---	---	---	---
31	3.9	---	43	30	---	55	---	---	---	---	---	---
TOTAL	142.3	2465.5	1493.9	1346	6750	3686	---	---	---	---	---	---
MEAN	4.59	82.2	48.2	43.4	241	119	---	---	---	---	-	---
MAX	12	1430	479	152	1510	1090	---	---	---	---	---	---
MIN	1.7	3.5	6.7	13	24	21	---	---	---	---	---	---

CAL YR 1988 TOTAL 9160.63 MEAN 25.0 MAX 1430 MIN .13

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1987 to March 1989.

PERIOD OF DAILY RECORD.--
CHEMICAL DATA: April 1987 to March 1989.
SPECIFIC CONDUCTANCE: March 1987 to March 1989.
WATER TEMPERATURES: March 1987 to March 1989.

INSTRUMENTATION.--Two parameter water-quality monitor.

REMARKS.--Miscellaneous measurement values may fall outside the range observed for that day by the water quality monitor due to minor differences in sampling location.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, >10,000 microsiemens, Jun. 25-27, July 2-3, 1987; minimum, 160 microsiemens, Feb. 3, Mar. 6, 1989.
WATER TEMPERATURE: Maximum, 32.9°C, Aug. 16, 1988; minimum, 0.0°C, Nov. 22, 1987, Jan. 5-16, 27, Dec. 12, 1988.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989:
SPECIFIC CONDUCTANCE: Maximum, 3,940 microsiemens, Oct. 15; minimum, 160 microsiemens, Feb. 3, Mar. 6.
WATER TEMPERATURE: Maximum, 21.0°C, Oct. 2; minimum, 0.0°C, Dec. 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 1988											
19...	0845	2.8	3640	6.90	5.5	10.5	9.7	90	690	620	190
JAN 1989											
19...	0830	40	503	7.30	7.5	3.5	12.5	96	100	75	28

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 1988											
19...	49	420	57	7	5.5	72	15	1100	9.1	0.024	3.4
JAN 1989											
19...	7.4	51	52	2	1.8	27	11	130	1.1	0.008	5.8

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
19...	2070	1850	2.82	15.8	0.05	<0.010	0.040	0.170	0.50	0.010	<0.010
JAN 1989											
19...	272	254	0.37	29.1	0.06	<0.010	0.050	0.100	0.20	<0.010	<0.010

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOSPHOROUS ORGANIC TOTAL (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
OCT 1988											
19...	0.01	10	2	1100	<0.5	110	<0	<5	<3	1	16
JAN 1989											
19...	--	20	<1	190	<0.5	20	0	2	<3	1	35

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 1988											
19...	<0	34	33	<10	20	<1.0	9700	<6	4	2.7	0.1
JAN 1989											
19...	<0	5	250	<10	<10	<1.0	1100	<6	8	2.1	0.2

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	ANTIMONY, DISSOLVED (UG/L AS SB)	SELENIUM, DISSOLVED (UG/L AS SE)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DISSOLVED (MG/L AS CN)
OCT 1988										
19...	0.10	<1	<1	4.6	<0.4	17	<0.4	11	<0.4	<0.01
JAN 1989										
19...	<0.10	<1	<1	0.5	0.5	4.0	0.5	3.0	0.5	<0.01

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE AIR (DEG C)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	HARDNESS TOTAL (MG/L AS CACO3)
NOV 1988									
16...	0830	11	1940	7.70	17.0	10.0	10.3	95	350
20...	0200	--	392	7.35	--	--	--	--	--
20...	0600	--	1350	7.35	--	--	--	--	--
DEC									
21...	0830	49	1420	7.60	9.0	6.5	11.4	95	260
21...	1220	109	1300	7.60	--	6.5	--	--	230
24...	1230	--	412	7.30	--	--	--	--	100
24...	1315	--	34	7.75	--	--	--	--	8
JAN 1989									
12...	1545	--	475	7.20	10.0	8.0	--	--	84
FEB									
03...	0700	--	174	7.45	--	--	--	--	38
14...	1130	--	184	7.75	--	--	--	--	45
15...	1530	--	148	7.50	--	--	--	--	35
24...	1000	67	252	6.80	-4.0	1.0	--	--	58
MAR									
22...	0945	115	302	6.84	5.0	5.5	12.0	97	61

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA- LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
NOV 1988								
16...	300	48	--	58	96	26	210	57
20...	--	--	--	--	<0.02	<0.01	<0.20	--
20...	--	--	--	--	<0.02	<0.01	<0.20	--
DEC								
21...	220	43	--	53	74	18	150	56
21...	240	--	--	--	66	17	150	58
24...	100	--	--	--	31	5.8	34	40
24...	8	--	--	--	2.7	0.30	2.1	33
JAN 1989								
12...	84	--	--	--	23	6.4	46	54
FEB								
03...	38	--	--	--	11	2.5	15	45
14...	45	--	--	--	13	3.1	16	43
15...	35	--	--	--	10	2.5	11	39
24...	44	--	--	--	16	3.8	22	45
MAR								
22...	61	20	37	25	17	4.4	27	49

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	BROMIDE DIS- SOLVED (MG/L AS BR)
NOV 1988								
16...	5	3.5	15	550	934	28.7	1.27	4.7
20...	--	<0.10	<2.0	<0.10	--	--	--	<0.010
20...	--	<0.10	<2.0	<0.10	--	--	--	<0.010
DEC								
21...	4	2.2	12	350	636	84.1	0.86	3.6
21...	4	2.3	12	330	581	171	0.79	3.4
24...	2	6.5	14	82	174	0.0	0.24	0.57
24...	0.3	0.90	5.1	3.8	15	0.0	0.02	<0.010
JAN 1989								
12...	2	2.0	12	110	201	0.0	0.27	0.91
FEB								
03...	1	1.1	7.1	35	72	0.0	0.10	0.27
14...	1	1.3	12	34	79	0.0	0.11	<0.26
15...	0.8	1.4	12	25	62	0.0	0.08	0.18
24...	1	1.4	12	51	114	20.7	0.15	0.42
MAR								
22...	2	1.3	10	64	124	38.6	0.17	0.51

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)
JAN 1989							
12...	1545	4300	300	10000	570	10	960
FEB							
14...	1130	6200	300	11000	550	<10	300
15...	1530	2300	100	5100	240	<10	200

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	PHENOL (C6H-5OH) TOTAL (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)
FEB 1989												
15...	1515	<5.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN												
09...	1345	<5.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)
FEB 1989												
15...	<0.20	<0.20	<0.20	<0.20	<0.20	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN												
09...	<0.20	<0.20	<0.20	<0.20	<0.20	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)
FEB 1989												
15...	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0
JUN												
09...	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0

DATE	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	STYRENE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)
FEB 1989												
15...	<30.0	<0.20	<0.20	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--
JUN												
09...	<30.0	<0.20	<0.20	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.2

DATE	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	1,3-DI CHLORO-PRO-PANE, WAT. WH TOTAL (UG/L)	ORTHO-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	PARA-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	1,1,1,2 TETRA-CHLORO-ETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	1,2-DI-CHLORO-ETHENE WATER WHOLE RECOVER (UG/L)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)
FEB 1989												
15...	--	--	--	--	--	<0.2	--	<0.01	<0.01	<0.01	<0.01	<0.01
JUN												
09...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0	<0.01	<0.01	<0.01	<0.01	<0.01

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PARA- THION, TOTAL (UG/L)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	ALA- CHLOR TOTAL RECOVER (UG/L)	CYAN- AZINE TOTAL (UG/L)	ATRA- ZINE, TOTAL (UG/L)	PICLO- RAM (TOR- DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED- IBEN) (BAN- VEL D) TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
FEB 1989												
15...	<0.01	<0.02	<0.01	<0.01	<0.50	<0.01	<0.10	<0.10	<0.10	<0.01	0.40	<0.01
JUN												
09...	<0.01	<0.01	<0.01	<0.01	--	<0.01	--	--	--	<0.01	<0.01	<0.01

DATE	AME- TRYNE TOTAL	METRI- BUZIN WATER WHOLE TOT.REC (UG/L)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L)	PRO- PAZINE TOTAL (UG/L)	TRI- FLURA- LIN TOTAL RECOVER (UG/L)	METHO- MYL TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)
FEB 1989											
15...	<0.10	<0.1	<0.1	<0.10	<0.10	<0.5	<0.5	<0.1	<0.10	<0.1	<0.1
JUN											
09...	--	--	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1970	1430	2660	2530	930	890	800	740	800	700	490	470
2	2320	1610	2750	2650	950	920	760	740	810	690	510	490
3	2290	1990	2960	2740	970	940	790	760	670	160	550	510
4	2600	1940	2910	2370	980	960	800	770	280	180	580	520
5	2600	1910	2780	1480	1000	970	850	790	330	250	560	190
6	2660	2010	1470	1410	1020	990	840	640	410	280	200	160
7	2650	1870	1530	1410	1040	1010	830	670	410	350	270	190
8	2810	2100	1550	1490	1110	1040	840	660	530	400	300	250
9	2940	2100	1740	1530	1230	1100	910	850	520	420	290	270
10	3350	2670	2010	1740	1210	1170	920	900	590	510	340	290
11	3300	2520	1900	1740	1180	1120	940	890	620	560	370	330
12	3440	2970	1730	1680	1890	1110	880	400	660	580	430	370
13	3790	2830	1800	1730	1590	1150	450	370	630	260	430	410
14	3890	3360	1830	1790	1170	1140	460	350	270	200	430	370
15	3940	3430	1910	1620	1200	1160	440	350	210	170	420	380
16	3690	3390	1940	1160	1220	1190	510	430	230	200	480	410
17	3800	3310	1690	1090	1240	1210	550	500	280	230	480	440
18	3820	3400	1180	1100	1270	1230	540	490	290	260	500	440
19	3740	3580	1410	590	1310	1260	550	480	310	290	510	470
20	3780	3740	630	410	1340	1300	580	510	310	300	550	480
21	3860	3310	540	460	1590	670	650	530	280	190	460	290
22	3760	2360	700	520	740	670	620	530	270	210	340	290
23	2490	2130	780	690	750	610	610	550	280	250	400	300
24	2430	2140	830	780	650	330	540	590	310	270	440	330
25	2330	2270	860	830	460	410	660	610	340	310	440	360
26	2360	2290	880	850	500	420	700	650	410	330	430	370
27	2610	2370	900	870	650	490	710	690	460	400	490	400
28	2920	2560	910	880	710	490	720	700	490	460	610	440
29	3000	2680	920	900	1560	530	720	710	---	---	570	510
30	2680	2390	930	910	1610	1550	700	660	---	---	670	560
31	2520	2360	---	---	1550	810	720	650	---	---	650	490
MONTH	3940	1430	2960	410	1890	330	940	350	810	160	670	160

03282075 BIG SINKING CREEK NEAR CRYSTAL, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.2	17.5	12.9	9.2	5.2	3.8	6.4	5.8	8.5	5.6	5.5	2.7
2	21.0	18.2	11.1	7.5	3.9	2.4	6.4	6.1	9.6	7.5	6.1	3.1
3	18.4	15.8	9.2	6.3	4.3	1.9	6.6	5.5	9.3	6.8	7.7	3.5
4	18.3	13.3	11.8	8.4	4.3	2.8	5.5	3.5	6.8	5.5	10.6	6.0
5	14.9	10.8	11.6	10.6	3.7	1.6	4.6	2.6	5.5	4.9	9.1	7.4
6	15.0	9.0	10.6	7.9	3.6	1.4	6.5	4.3	5.1	4.0	7.4	6.2
7	14.0	8.4	9.8	7.8	5.3	2.4	8.2	5.9	4.1	3.0	6.2	4.8
8	13.8	7.9	11.2	8.0	5.3	4.6	9.0	6.7	3.7	1.8	6.5	4.3
9	14.0	7.8	10.1	6.7	4.7	2.5	6.7	4.8	2.7	.7	7.0	4.5
10	13.4	9.4	11.6	8.8	3.1	.9	5.6	4.4	3.4	.6	7.6	4.5
11	15.1	9.8	10.6	7.3	3.1	.2	5.7	4.4	4.6	1.0	9.1	5.5
12	11.3	7.2	8.7	6.1	.5	.0	8.1	5.7	4.6	1.7	9.3	6.6
13	12.0	5.9	10.9	8.3	2.0	.1	7.6	5.3	4.5	2.4	8.1	7.6
14	11.9	4.5	9.6	6.6	4.2	1.2	6.1	4.8	6.3	4.6	10.0	7.6
15	12.8	6.1	10.1	6.4	4.5	2.8	6.6	6.1	7.2	6.2	10.5	8.9
16	10.9	7.2	11.3	9.2	2.7	1.0	6.1	5.0	7.0	6.0	10.3	6.5
17	14.6	9.7	10.0	6.0	2.1	.9	4.9	3.1	5.9	4.9	11.4	6.0
18	14.6	12.8	6.8	4.4	2.1	.4	4.7	3.0	5.4	4.3	10.6	8.3
19	13.7	10.1	9.4	6.6	2.9	.5	5.0	3.5	5.3	3.4	10.2	6.8
20	12.1	8.1	11.3	9.4	5.8	1.8	4.7	3.4	6.2	4.4	8.0	7.2
21	10.9	10.0	9.8	8.0	6.9	5.8	3.6	2.1	7.2	6.3	8.2	6.5
22	12.0	9.7	7.8	6.1	6.7	5.7	3.8	1.3	6.4	4.5	8.0	5.3
23	10.2	7.3	7.2	5.6	7.8	6.7	4.0	1.5	4.4	2.8	7.4	5.7
24	10.9	8.4	6.9	5.2	8.9	7.5	5.0	2.6	2.8	.9	9.0	7.1
25	9.5	6.5	7.6	5.3	8.1	5.9	7.3	4.5	3.6	.8	9.9	7.2
26	10.6	6.7	8.9	6.0	5.9	4.4	7.4	6.4	5.4	3.5	12.3	7.7
27	9.8	4.6	10.2	8.9	7.3	5.1	7.0	4.7	4.9	3.7	13.3	9.3
28	11.5	7.9	9.1	5.5	8.2	5.3	6.1	3.2	5.8	2.9	15.4	10.7
29	9.8	6.4	5.6	4.1	5.3	4.5	---	---	---	---	14.5	12.4
30	9.5	6.2	6.2	4.2	6.0	4.9	---	---	---	---	14.2	12.5
31	9.7	6.4	---	---	5.9	5.1	---	---	---	---	12.7	9.2
MONTH	21.0	4.5	12.9	4.1	8.9	.0	---	---	9.6	.6	15.4	2.7

03282100 FURNACE FORK NEAR CRYSTAL, KY

LOCATION.--Lat 37°41'21", long 83°51'27", Estill County, Hydrologic Unit 05100204, on right bank on downstream side of box culvert on county road, 2.9 miles south of Fitchburg, and 2.5 miles northwest of Crystal.

DRAINAGE AREA.--9.94 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1988 to March 1989, (discontinued).

GAGE.--Water-stage recorder. Datum of gage is approximately 630 ft above National Geodetic Vertical Datum of 1929 (from topographic map).

REMARKS.--Estimated daily discharges: Dec. 21, Jan. 14. Water-discharge records good except those above 200 ft^3/s which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,140 ft^3/s, Nov. 20, 1988, gage height, 10.48 ft; no flow on July 8-10, 1988.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989: Maximum discharge, 1,140 ft^3/s, Nov. 20, gage height, 10.48 ft; minimum, 0.28 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.56	14	22	13	17	---	---	---	---	---	---
2	1.3	.56	13	20	35	16	---	---	---	---	---	---
3	1.0	.53	12	18	701	15	---	---	---	---	---	---
4	.79	.73	11	15	90	14	---	---	---	---	---	---
5	.67	20	10	14	37	269	---	---	---	---	---	---
6	.56	14	9.5	24	25	271	---	---	---	---	---	---
7	.50	12	9.3	22	19	67	---	---	---	---	---	---
8	.47	10	8.5	30	15	45	---	---	---	---	---	---
9	.44	8.1	7.8	25	13	36	---	---	---	---	---	---
10	.42	25	7.6	21	12	31	---	---	---	---	---	---
11	.39	20	7.2	20	10	28	---	---	---	---	---	---
12	.36	12	6.8	86	9.3	26	---	---	---	---	---	---
13	.34	10	6.7	59	152	27	---	---	---	---	---	---
14	.34	8.3	6.5	46	470	29	---	---	---	---	---	---
15	.32	6.8	6.2	56	592	26	---	---	---	---	---	---
16	.32	8.5	5.5	35	202	24	---	---	---	---	---	---
17	.39	13	5.4	27	63	22	---	---	---	---	---	---
18	.33	10	5.3	23	39	27	---	---	---	---	---	---
19	.32	182	5.1	19	30	27	---	---	---	---	---	---
20	.28	481	5.1	17	56	61	---	---	---	---	---	---
21	1.5	53	56	15	384	137	---	---	---	---	---	---
22	3.1	30	37	13	65	48	---	---	---	---	---	---
23	1.7	23	61	12	42	35	---	---	---	---	---	---
24	3.9	19	218	11	30	31	---	---	---	---	---	---
25	2.1	16	60	11	26	27	---	---	---	---	---	---
26	1.2	14	32	10	24	24	---	---	---	---	---	---
27	.77	17	24	9.8	22	21	---	---	---	---	---	---
28	.79	19	45	9.2	19	20	---	---	---	---	---	---
29	.87	17	35	9.0	---	20	---	---	---	---	---	---
30	.71	15	26	15	---	25	---	---	---	---	---	---
31	.60	---	21	15	---	53	---	---	---	---	---	---
TOTAL	28.08	1066.08	777.5	729.0	3195.3	1519	---	---	---	---	---	---
MEAN	.91	35.5	25.1	23.5	114	49.0	---	---	---	---	---	---
MAX	3.9	481	218	86	701	271	---	---	---	---	---	---
MIN	.28	.53	5.1	9.0	9.3	14	---	---	---	---	---	---

CAL YR 1988 TOTAL 4462.12 MEAN 12.2 MAX 481 MIN .00

03282100 FURNACE FORK NEAR CRYSTAL, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1987 to March 1989.

PERIOD OF DAILY RECORD.--
CHEMICAL DATA: April 1987 to March 1989.
SPECIFIC CONDUCTANCE: March 1987 to March 1989.
WATER TEMPERATURE: March 1987 to March 1989.

INSTRUMENTATION.--Two parameter water-quality monitor.

REMARKS.--Miscellaneous measurement values may fall outside the range observed for that day by the water quality monitor due to minor differences in sampling location.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,980 microsiemens, Nov. 12, 1987; minimum, 140 microsiemens, Mar. 5, 1989.
WATER TEMPERATURE: Maximum, 29.9°C, Aug. 10, 1988; minimum, 0.0°C, many days in 1988 and 1989.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989:
SPECIFIC CONDUCTANCE: Maximum, 970 microsiemens, Oct. 23; minimum, 140 microsiemens, Mar. 5.
WATER TEMPERATURE: Maximum observed, 20.5°C, Oct. 2; minimum observed, 0.0°C, Jan. 16-19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 1988											
19...	1145	0.33	715	7.60	11.5	12.0	7.3	70	230	220	74
DEC											
21...	1400	158	240	8.00	11.0	8.0	10.8	93	100	22	35
JAN 1989											
19...	1100	18	350	8.20	10.5	4.5	12.6	100	170	150	58

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 1988											
19...	9.6	52	33	2	2.7	9	19	110	0.59	0.004	6.0
DEC											
21...	3.6	7.2	13	0.3	1.6	81	20	11	0.021	--	5.5
JAN 1989											
19...	5.6	9.7	11	0.3	1.2	14	19	13	0.065	0.002	5.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
19...	385	281	0.52	0.34	0.01	<0.010	0.010	<0.100	0.30	0.010	<0.010
DEC											
21...	137	135	0.19	58.4	0.05	<0.010	0.040	0.360	0.60	0.040	<0.010
JAN 1989											
19...	197	122	0.27	9.79	0.03	<0.010	0.020	0.150	<0.20	<0.010	<0.010

03282100 FURNACE FORK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
19...	0.01	<10	<1	420	<0.5	50	<0	<5	<3	1	61
DEC											
21...	0.04	90	1	77	<0.5	20	<0	<0	<3	2	180
JAN 1989											
19...	--	<10	<1	130	<0.5	10	<0	<0	<3	<0	12

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
19...	<0	13	60	<10	<10	<1.0	730	<6	6	0.4	0.1
DEC											
21...	<0	4	8	<10	<10	<1.0	150	<6	4	5.6	3.3
JAN 1989											
19...	<0	6	14	<10	<10	<1.0	240	<6	5	1.4	0.1

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988										
19...	0.10	<1	<1	1.2	<0.4	3.7	<0.4	2.8	<0.4	<0.01
DEC										
21...	--	--	--	<0.4	11	2.4	16	1.9	14	--
JAN 1989										
19...	<0.10	<1	<1	0.9	<0.4	1.6	<0.4	1.2	<0.4	<0.01

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 1988									
18...	0855	--	645	7.31	--	16.5	--	--	--
NOV									
15...	1025	--	515	7.90	--	8.5	--	--	--
16...	1115	5.3	526	8.20	16.0	12.5	10.3	100	200
19...	2400	--	285	6.95	--	--	--	--	110
20...	0100	--	249	7.15	--	--	--	--	110
DEC									
14...	0854	2.7	515	7.91	--	1.0	--	--	--
24...	1030	--	254	7.25	--	--	--	--	120
24...	1230	--	221	7.40	--	--	--	--	91
JAN 1989									
12...	1500	--	257	7.90	12.0	9.0	--	--	110
25...	0930	6.3	420	7.92	--	6.0	--	--	--
FEB									
14...	1350	--	174	7.35	--	--	--	--	81
15...	1335	--	163	7.55	--	--	6.0	--	75
24...	1300	27	300	7.90	-3.5	2.0	--	--	140
MAR									
02...	1045	11	339	7.26	--	5.0	--	--	--
22...	1210	46	283	8.00	8.0	7.5	11.7	99	140

03282100 FURNACE FORK NEAR CRYSTAL, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	HARD- NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA- LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT 1988								
18...	--	--	--	--	--	--	--	--
NOV								
15...	--	--	--	--	--	--	--	--
16...	26	172	--	210	66	8.1	31	25
19...	110	--	--	--	39	3.6	7.2	12
20...	110	--	--	--	39	3.4	4.8	8
DEC								
14...	--	--	--	--	--	--	--	--
24...	120	--	--	--	41	3.5	4.5	8
24...	91	--	--	--	31	3.3	6.3	13
JAN 1989								
12...	110	--	--	--	37	3.8	5.8	10
25...	--	--	--	--	--	--	--	--
FEB								
14...	81	--	--	--	28	2.6	3.0	7
15...	75	--	--	--	26	2.4	2.8	7
24...	26	--	--	--	47	4.4	6.3	9
MAR								
02...	--	--	--	--	--	--	--	--
22...	140	114	115	139	47	4.4	4.8	7

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	BROMIDE DIS- SOLVED (MG/L AS BR)
OCT 1988								
18...	--	--	--	100	--	--	--	0.74
NOV								
15...	--	--	--	44	--	--	--	0.26
16...	1	1.8	22	50	282	4.03	0.38	0.29
19...	0.3	2.7	15	11	79	0.0	0.11	0.029
20...	0.2	2.8	15	6.8	72	0.0	0.10	0.014
DEC								
14...	--	--	--	--	--	--	--	--
24...	0.2	1.6	15	6.2	72	0.0	0.10	0.012
24...	0.3	2.0	16	10	69	0.0	0.09	0.021
JAN 1989								
12...	0.3	1.5	16	6.8	71	0.0	0.10	0.012
25...	--	--	--	--	--	--	--	--
FEB								
14...	0.2	1.3	14	3.3	52	0.0	0.07	<0.010
15...	0.1	1.3	13	2.5	48	0.0	0.06	<0.010
24...	0.2	1.0	16	9.0	150	11.0	0.20	0.031
MAR								
02...	--	--	--	14	--	--	--	<0.010
22...	0.2	1.0	16	5.7	79	9.78	0.11	0.023

DATE	TIME	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)
JAN 1989							
12...	1500	3000	100	4800	110	10	90
FEB							
14...	1350	3000	100	3900	100	<10	30
15...	1335	7200	100	13000	320	20	10

03282100 FURNACE FORK NEAR CRYSTAL, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	620	590	790	780	420	410	370	340	370	350	340	300
2	630	600	800	780	430	410	360	340	360	310	350	310
3	640	620	800	770	440	420	360	350	310	180	350	310
4	640	630	790	770	460	430	370	360	190	170	360	340
5	660	640	770	460	460	440	380	360	230	200	380	140
6	670	650	540	490	470	440	360	310	260	240	260	160
7	710	670	530	510	470	450	340	320	290	260	290	250
8	700	690	550	520	480	460	350	310	300	290	300	290
9	700	700	570	540	480	460	340	320	310	310	320	300
10	710	710	570	340	490	470	360	340	320	320	330	310
11	720	710	460	390	510	480	390	320	330	330	330	320
12	720	720	470	450	530	490	330	240	330	320	340	320
13	730	730	510	460	510	500	330	270	320	260	340	310
14	740	740	520	480	510	490	330	270	250	170	330	310
15	750	750	530	510	500	490	320	270	170	160	330	310
16	760	700	540	470	510	500	330	300	190	170	340	320
17	690	620	500	460	520	490	340	320	220	190	350	330
18	680	640	500	470	510	490	350	320	250	230	340	290
19	720	680	500	220	510	480	360	340	280	260	330	300
20	720	700	300	160	500	490	380	360	300	270	340	180
21	720	670	350	300	530	240	390	370	270	240	280	190
22	870	680	380	340	360	310	410	380	280	260	300	260
23	970	880	390	370	370	260	400	380	290	290	300	280
24	930	850	410	390	330	170	420	390	310	300	310	290
25	900	870	410	390	320	270	420	400	320	300	320	290
26	900	820	420	400	340	300	420	400	320	300	320	300
27	830	790	420	390	350	330	420	400	320	300	320	300
28	800	770	400	390	350	270	420	390	330	300	330	300
29	790	770	410	390	330	290	420	400	---	---	330	300
30	790	770	410	400	350	330	400	350	---	---	320	300
31	790	770	---	---	370	340	360	340	---	---	310	240
MONTH	970	590	800	160	530	170	420	240	370	160	380	140

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	.9	13.4	7.3	6.3	4.6	7.1	6.5	10.7	5.5	---	---
2	20.5	.7	11.8	7.6	4.8	2.7	6.8	6.5	---	---	---	---
3	18.8	15.3	11.1	6.8	5.4	2.4	7.0	5.8	---	---	---	---
4	18.2	8.0	14.0	9.5	5.6	3.6	5.8	4.0	---	---	12.3	6.9
5	15.8	11.8	12.8	10.9	4.6	2.2	5.4	2.3	---	---	11.4	7.7
6	---	---	10.8	8.3	4.7	1.9	8.0	5.5	---	---	7.7	6.8
7	---	---	11.6	8.3	6.3	3.1	10.1	.4	---	---	6.7	5.1
8	---	---	12.9	9.3	6.3	4.4	10.9	.3	---	---	9.3	.4
9	---	---	11.7	7.8	5.9	3.5	6.6	3.0	---	---	9.9	3.5
10	---	---	13.4	1.7	3.7	1.8	6.3	4.9	---	---	10.6	.4
11	---	---	10.9	1.7	3.4	1.3	6.8	5.0	---	---	12.0	.5
12	---	---	10.1	7.0	2.2	.5	9.5	4.7	---	---	11.2	.5
13	---	---	13.5	9.9	2.3	.9	8.6	.1	---	---	9.6	8.0
14	---	---	11.8	7.7	4.4	1.0	7.9	.1	---	---	12.5	.7
15	---	---	11.5	8.2	5.0	3.3	8.4	6.6	---	---	11.9	.7
16	---	---	12.7	9.0	3.6	1.9	8.2	.0	---	---	12.1	.7
17	---	---	10.8	7.1	2.4	1.3	6.9	.0	---	---	13.6	.7
18	---	---	8.6	4.8	2.3	.7	6.8	.0	---	---	12.5	8.4
19	---	---	10.8	7.9	4.0	.7	6.9	.0	---	---	12.2	.8
20	12.0	.9	12.9	10.5	6.2	2.3	---	---	---	---	9.6	7.6
21	11.2	10.3	10.4	8.2	8.4	6.2	4.6	.6	---	---	9.6	7.2
22	12.0	9.4	9.3	6.6	7.8	6.5	4.9	1.4	---	---	10.6	1.0
23	10.0	7.4	8.9	6.0	9.6	7.1	5.8	1.5	---	---	---	---
24	11.7	8.1	---	---	10.7	8.3	6.1	.6	---	---	10.9	4.1
25	9.7	6.9	---	---	---	---	9.5	4.2	---	---	12.0	.1
26	11.2	6.6	---	---	7.2	4.7	8.9	8.0	---	---	15.2	7.7
27	11.1	4.7	11.9	3.4	---	---	8.4	3.2	---	---	15.5	8.5
28	12.7	7.9	---	---	9.0	4.7	7.5	3.3	---	---	17.6	.5
29	11.1	.8	6.8	4.3	6.6	5.0	8.4	6.3	---	---	16.4	.7
30	11.1	6.5	7.6	5.1	6.8	5.3	8.8	4.6	---	---	15.2	.7
31	11.1	6.5	---	---	6.7	4.8	---	---	---	---	14.0	9.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

03282500 RED RIVER NEAR HAZEL GREEN, KY

LOCATION.--Lat 37°48'44", long 83°27'50", Wolfe County, Hydrologic Unit 05100204, on right bank 600 ft upstream from Buck Creek, 0.3 mi downstream from Chapel Branch, 2.7 mi northwest of Hazel Green, and at mile 72.7.

DRAINAGE AREA.--65.8 mi^2.

PERIOD OF RECORD.--April 1954 to current year.

REVISED RECORDS.--WRD KY 72-1: 1971.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 870.11 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: July 8-20. Records good except those for estimated daily discharges which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--35 years, 87.6 ft^3/s, 18.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,080 ft^3/s, Feb. 27, 1962, gage height, 22.12 ft, from rating curve extended above 3,000 ft^3/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0830	1,670	6.46	Feb. 21	0800	*2,660	*9.17
Dec. 25	0230	1,280	5.59	Mar. 6	1600	2,570	8.86
Feb. 3	1830	2,430	8.69	May 23	Unknown	Unknown	Unknown
Feb. 15	1700	2,330	8.11				

Minimum daily discharge, 0.71 ft^3/s, Oct. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	3.3	51	112	68	79	139	17	36	25	54	12
2	4.2	2.6	38	87	70	70	128	22	36	22	49	25
3	3.2	2.6	32	75	2010	65	230	17	61	20	25	18
4	3.4	3.0	28	63	1480	62	544	15	44	20	15	12
5	1.9	9.2	23	54	382	821	382	37	41	22	19	9.7
6	1.3	41	20	92	239	2380	233	60	77	31	70	8.3
7	1.6	43	19	111	165	900	169	67	65	27	42	6.6
8	1.6	41	18	127	122	288	149	57	50	22	26	6.0
9	1.8	27	15	122	88	195	161	324	54	18	16	4.9
10	1.7	44	13	108	75	145	138	771	50	12	13	4.2
11	1.3	88	12	94	68	123	118	294	37	10	9.8	3.7
12	1.0	46	8.8	308	62	103	96	188	31	7.2	7.3	5.4
13	.81	37	9.4	466	212	99	80	136	176	4.5	5.4	5.4
14	.84	25	10	284	1280	117	67	121	159	8.0	4.7	6.4
15	.84	19	11	393	2100	102	77	133	566	5.0	5.1	105
16	.81	19	8.9	273	1660	84	69	134	583	4.2	4.0	575
17	.71	32	8.4	189	553	76	60	110	268	3.2	16	340
18	.77	31	7.3	142	289	79	56	88	145	2.7	188	118
19	.77	207	6.8	111	193	71	52	75	120	10	45	70
20	.77	1400	6.8	87	308	80	45	82	105	100	21	47
21	2.8	629	103	70	2330	750	39	68	79	26	22	37
22	7.4	158	218	58	786	432	35	102	79	16	24	74
23	14	93	166	52	304	248	33	1090	95	11	15	531
24	16	64	718	48	202	195	29	682	59	13	16	344
25	19	45	745	45	154	147	27	253	44	9.8	75	162
26	9.4	37	240	44	130	123	24	156	34	5.1	50	144
27	3.9	42	162	42	113	104	21	143	28	4.0	29	102
28	3.9	91	173	36	92	89	18	98	78	9.3	19	72
29	2.7	89	192	35	---	80	16	73	45	8.8	14	57
30	4.4	68	155	54	---	80	18	57	31	7.8	25	54
31	3.5	---	126	69	---	118	---	44	---	12	19	---
TOTAL	121.72	3436.7	3344.4	3851	15535	8305	3253	5514	3276	496.6	943.3	2959.6
MEAN	3.93	115	108	124	555	268	108	178	109	16.0	30.4	98.7
MAX	19	1400	745	466	2330	2380	544	1090	583	100	188	575
MIN	.71	2.6	6.8	35	62	62	16	15	28	2.7	4.0	3.7
CFSM	.06	1.74	1.64	1.89	8.43	4.07	1.65	2.70	1.66	.24	.46	1.50
IN.	.07	1.94	1.89	2.18	8.78	4.70	1.84	3.12	1.85	.28	.53	1.67

CAL YR 1988 TOTAL 18741.89 MEAN 51.2 MAX 1400 MIN .00 CFSM .78 IN. 10.60
WTR YR 1989 TOTAL 51036.32 MEAN 140 MAX 2380 MIN .71 CFSM 2.13 IN. 28.85

03283370 CAT CREEK NEAR STANTON, KY

LOCATION.--Lat 37°49'55", long 83°48'41", Powell County, Hydrologic Unit 05100204, on right bank on downstream side of box culvert on State Highway 11, 2.7 miles southeast of Stanton.

DRAINAGE AREA.--8.30 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1987 to March 1989, (discontinued).

GAGE.--Water-stage recorder. Datum of gage is approximately 650 ft above National Geodetic Vertical Datum of 1929 (from topographic map).

REMARKS.--Estimated daily discharges: Feb. 24. Water-discharge records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,630 ft^3/s, Nov. 20, 1988, gage height, 15.18 ft, Feb. 15, 1989; no flow at times.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989: Maximum discharge, 1,630 ft^3/s, Nov. 20, gage height, 15.18 ft, Feb. 15; minimum, 0.09 ft^3/s, Nov. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	.11	10	20	6.6	14	---	---	---	---	---	---
2	.55	.11	8.2	18	7.1	12	---	---	---	---	---	---
3	.50	.12	7.1	16	656	11	---	---	---	---	---	---
4	.45	.39	6.4	14	144	10	---	---	---	---	---	---
5	.38	23	5.6	12	51	444	---	---	---	---	---	---
6	.30	10	5.2	22	29	472	---	---	---	---	---	---
7	.23	7.8	4.8	18	21	85	---	---	---	---	---	---
8	.24	4.3	4.4	31	17	36	---	---	---	---	---	---
9	.22	2.1	3.8	21	15	23	---	---	---	---	---	---
10	.21	24	3.3	17	13	18	---	---	---	---	---	---
11	.20	14	3.0	18	9.6	15	---	---	---	---	---	---
12	.20	5.8	2.6	83	8.0	12	---	---	---	---	---	---
13	.19	6.1	2.2	64	182	17	---	---	---	---	---	---
14	.18	4.0	2.2	55	612	17	---	---	---	---	---	---
15	.16	2.6	2.0	61	542	13	---	---	---	---	---	---
16	.13	6.3	1.7	33	242	9.4	---	---	---	---	---	---
17	.12	9.9	1.7	23	100	8.2	---	---	---	---	---	---
18	.15	4.8	1.5	18	43	11	---	---	---	---	---	---
19	.16	468	1.3	15	31	11	---	---	---	---	---	---
20	.16	944	1.3	12	82	37	---	---	---	---	---	---
21	.79	163	71	9.4	746	128	---	---	---	---	---	---
22	1.4	35	31	8.3	64	51	---	---	---	---	---	---
23	1.1	24	108	7.2	43	24	---	---	---	---	---	---
24	1.4	18	426	6.4	32	17	---	---	---	---	---	---
25	.39	14	134	5.6	25	12	---	---	---	---	---	---
26	.17	12	39	5.3	22	9.5	---	---	---	---	---	---
27	.12	17	29	4.8	19	7.5	---	---	---	---	---	---
28	.15	19	50	4.3	16	5.7	---	---	---	---	---	---
29	.16	14	35	4.0	---	6.4	---	---	---	---	---	---
30	.14	12	25	8.7	---	12	---	---	---	---	---	---
31	.12	---	20	7.7	---	54	---	---	---	---	---	---
TOTAL	11.28	1665.43	1046.3	642.7	3778.3	1602.7	---	---	---	---	---	---
MEAN	.36	62.2	33.8	20.7	135	51.7	---	---	---	---	---	---
MAX	1.4	944	426	83	746	472	---	---	---	---	---	---
MIN	.12	.11	1.3	4.0	6.6	5.7	---	---	---	---	---	---

CAL YR 1988 TOTAL 5764.61 MEAN 15.8 MAX 944 MIN .00

03283370 CAT CREEK NEAR STANTON, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1987 to March 1989.

PERIOD OF DAILY RECORD.--
CHEMICAL DATA: April 1987 to March 1989.
SPECIFIC CONDUCTANCE: March 1987 to March 1989.
WATER TEMPERATURE: March 1987 to March 1989.

INSTRUMENTATION.--Two parameter water-quality monitor.

REMARKS.--Miscellaneous measurement values may fall outside the range observed for that day by the water quality monitor due to minor differences in sampling location.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 750 microsiemens, Nov. 25-29, 1987; minimum, 30 microsiemens, Apr. 18, 1988.
WATER TEMPERATURE: Maximum, 31.0°C, Aug. 14, 1988; minimum, 0.0°C, many days in 1988.

EXTREMES FOR CURRENT PERIOD.--October 1988 to March 1989:
SPECIFIC CONDUCTANCE: Maximum, 530 microsiemens, Nov. 2-3; minimum, 90 microsiemens, Nov. 20 and Feb. 15.
WATER TEMPERATURE: Maximum, 21.1°C, Oct. 1; minimum, 0.9°C, Dec. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT 1988											
17...	1130	0.14	477	7.70	20.0	12.0	7.3	70	180	45	60
JAN 1989											
19...	1430	13	242	8.20	17.0	7.0	12.1	102	120	21	42

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT 1988											
17...	6.5	27	25	0.9	2.7	132	17	55	0.25	0.005	4.6
JAN 1989											
19...	3.9	4.1	7	0.2	1.2	100	17	5.0	0.024	0.002	6.2

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
17...	265	253	0.36	0.10	0.05	<0.010	0.040	<0.100	0.50	0.020	<0.010
JAN 1989											
19...	132	141	0.18	4.70	0.01	<0.010	0.010	0.160	<0.20	<0.010	<0.010

03283370 CAT CREEK NEAR STANTON, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
17...	0.02	<10	2	33	<0.5	20	<0	<5	<3	1	21
JAN 1989											
19...	--	90	<1	20	<0.5	<10	<0	<0	<3	0	170

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
17...	<0	11	340	<10	<10	<1.0	150	<6	4	2.5	0.4
JAN 1989											
19...	1	5	28	<10	<10	<1.0	78	<6	290	1.5	0.1

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988										
17...	<0.10	<1	<1	<0.4	<0.4	4.4	0.8	3.3	0.8	<0.01
JAN 1989										
19...	<0.10	<1	<1	0.5	<0.4	1.7	<0.4	1.3	<0.4	<0.01

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1988									
14...	1115	4.0	353	7.50	14.0	7.0	11.1	93	150
19...	0600	--	305	7.25	--	--	--	--	110
19...	0730	--	132	7.45	--	--	--	--	50
DEC									
19...	1145	1.1	379	7.80	15.5	1.0	12.7	92	150
23...	0630	--	172	7.40	--	--	--	--	67
JAN 1989									
12...	1830	--	178	7.93	9.0	9.5	--	--	86
14...	2030	--	177	7.30	--	--	--	--	78
FEB									
15...	1250	--	109	7.45	--	--	--	--	52
22...	1200	--	179	7.40	3.5	6.5	--	--	81
MAR									
20...	1200	14	245	7.78	12.0	7.5	12.6	109	110

03283370 CAT CREEK NEAR STANTON, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKALINITY WAT DIS TOT FET FIELD MG/L AS CACO3	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT
NOV 1988								
14...	22	126	--	154	50	5.5	13	16
19...	110	--	--	--	37	4.7	15	22
19...	50	--	--	--	16	2.4	3.9	13
DEC								
19...	30	118	--	144	51	5.1	15	18
23...	67	--	--	--	22	3.0	4.7	13
JAN 1989								
12...	87	--	--	--	29	3.4	3.4	8
14...	78	--	--	--	26	3.2	3.0	8
FEB								
15...	52	--	--	--	18	1.8	1.1	4
22...	11	116	--	142	28	2.8	1.9	5
MAR								
20...	110	97	97	118	38	4.1	4.2	7

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER DAY)	SOLIDS, DISSOLVED (TONS PER AC-FT)	BROMIDE DISSOLVED (MG/L AS BR)
NOV 1988								
14...	0.5	1.8	24	18	188	2.05	0.26	0.074
19...	0.6	3.3	21	23	104	0.0	0.14	0.076
19...	0.3	4.1	16	5.6	48	0.0	0.06	0.020
DEC								
19...	0.6	3.5	17	27	190	0.57	0.26	0.15
23...	0.3	2.8	18	6.9	57	0.0	0.08	0.020
JAN 1989								
12...	0.2	1.5	17	2.6	57	0.0	0.08	<0.010
14...	0.2	1.8	19	2.9	56	0.0	0.08	<0.010
FEB								
15...	0.1	1.2	13	1.0	36	0.0	0.05	<0.010
22...	0.1	1.2	18	2.0	96	0.0	0.13	0.015
MAR								
20...	0.2	1.1	16	4.8	68	2.63	0.09	<0.010

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
JAN 1989							
12...	1830	1900	<100	2400	40	<10	30
FEB							
15...	1250	4200	<100	5700	110	10	<10

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	450	430	510	490	300	290	220	200	260	250	230	210
2	460	440	530	500	310	290	220	210	260	200	260	230
3	460	440	530	420	300	290	230	210	190	100	270	250
4	490	450	480	460	300	280	230	220	160	140	290	260
5	490	460	480	300	300	290	240	220	180	150	300	100
6	480	450	360	310	300	290	220	210	200	170	180	110
7	460	450	370	350	300	280	230	220	220	200	210	180
8	460	450	390	370	300	280	230	210	230	210	280	190
9	470	460	400	380	300	280	230	220	260	220	280	260
10	480	460	400	270	300	280	230	220	260	250	280	260
11	480	460	320	280	300	280	240	220	260	240	280	270
12	480	470	350	320	310	280	230	150	260	250	290	270
13	480	470	350	340	380	310	220	170	270	130	290	250
14	490	470	360	340	370	360	230	140	200	130	280	250
15	490	480	360	340	380	370	210	160	260	90	280	260
16	500	480	350	270	380	360	230	210	220	120	280	270
17	490	480	320	280	380	370	240	220	210	210	280	260
18	490	480	330	310	380	360	240	230	220	220	280	240
19	500	490	320	110	390	370	250	230	230	230	270	250
20	500	490	150	90	390	370	250	240	240	200	270	150
21	500	490	180	140	430	170	250	240	200	140	200	150
22	500	490	220	180	260	220	250	240	180	140	210	190
23	500	400	240	220	270	140	250	240	210	170	220	210
24	470	410	250	230	200	130	260	250	220	200	220	220
25	480	460	270	240	170	140	260	240	220	200	230	230
26	500	480	280	260	180	160	260	240	220	200	230	230
27	500	480	290	260	190	170	260	250	220	210	230	230
28	500	490	290	280	200	180	260	250	220	200	230	230
29	500	490	300	290	190	180	260	250	---	---	240	240
30	510	490	300	280	210	190	260	250	---	---	240	240
31	510	490	---	---	220	200	260	250	---	---	240	180
MONTH	510	400	530	90	430	130	260	140	270	90	300	100

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.1	19.4	11.0	8.9	6.1	4.8	4.4	4.1	11.3	6.7	6.7	4.3
2	20.9	10.2	10.6	8.7	4.8	4.0	4.3	3.7	11.3	9.3	7.2	4.6
3	18.8	14.9	10.2	7.8	5.0	3.9	4.0	3.6	10.3	8.2	9.2	5.2
4	17.1	14.6	12.7	9.9	5.0	4.0	3.5	2.6	8.2	6.7	11.9	8.3
5	15.4	12.4	12.7	10.8	4.2	3.4	2.6	1.4	6.6	6.2	11.9	9.7
6	13.9	11.0	10.7	7.9	3.8	3.5	5.5	2.4	6.3	5.4	9.6	8.5
7	13.4	10.8	11.5	7.9	5.0	3.5	7.6	4.1	5.4	4.2	8.4	6.7
8	13.0	10.1	12.4	8.9	5.2	4.5	8.3	4.4	5.0	3.1	10.1	1.4
9	13.3	10.4	10.7	7.5	4.4	3.4	4.3	2.9	4.0	2.2	11.1	4.6
10	13.5	11.3	12.7	10.0	3.4	2.5	4.0	2.2	2.9	2.0	11.5	4.9
11	14.1	11.9	9.8	7.5	3.4	2.8	4.4	2.7	4.5	2.1	13.1	6.1
12	12.3	10.0	8.7	5.5	2.9	2.5	7.1	4.2	4.5	3.0	12.4	7.9
13	11.4	8.0	11.5	8.7	2.6	2.2	5.6	3.5	5.2	2.6	10.6	8.7
14	11.3	7.4	9.5	6.3	2.7	2.0	4.9	3.0	7.1	5.3	14.1	9.0
15	12.6	8.5	9.9	6.3	2.8	2.4	5.4	4.5	8.9	7.1	13.3	10.8
16	12.0	9.6	12.3	9.9	2.5	1.9	5.6	3.3	---	---	13.2	7.2
17	14.2	11.3	10.1	6.4	2.0	1.7	4.5	1.9	---	---	14.9	7.1
18	14.6	13.5	7.8	4.2	1.8	1.6	4.5	1.8	---	---	14.0	9.6
19	13.5	11.2	9.9	6.7	2.9	.9	7.5	2.4	---	---	12.9	7.5
20	12.4	9.6	12.2	9.9	5.0	2.9	5.5	4.3	---	---	10.4	7.4
21	11.4	10.5	9.9	7.6	8.9	5.1	4.7	3.7	---	---	8.9	7.0
22	11.3	10.3	8.6	5.7	6.3	4.9	4.8	3.4	---	---	9.7	5.7
23	11.0	8.8	8.3	5.2	7.8	6.2	5.1	3.9	5.7	3.4	8.7	5.9
24	10.5	9.3	7.8	4.8	8.4	6.6	5.7	4.3	4.6	1.5	---	---
25	9.8	8.3	8.4	5.3	7.6	5.4	8.0	5.7	5.9	1.6	---	---
26	9.4	7.9	9.4	6.9	5.3	3.4	9.0	8.1	7.2	4.7	---	---
27	8.9	6.5	11.0	9.5	6.4	4.0	8.4	5.6	6.1	4.8	---	---
28	11.8	8.9	9.5	5.5	6.5	3.7	6.6	4.5	7.2	4.1	---	---
29	10.3	8.2	6.4	4.4	4.1	2.9	7.8	6.4	---	---	---	---
30	9.5	7.8	6.7	5.1	4.2	3.1	8.8	7.1	---	---	---	---
31	9.9	7.7	---	---	4.2	2.9	9.7	4.9	---	---	---	---
MONTH	21.1	6.5	12.7	4.2	8.4	.9	9.7	1.4	---	---	---	---

KENTUCKY RIVER BASIN

03283500 RED RIVER AT CLAY CITY, KY

LOCATION.--Lat 37°51'53", long 83°56'01", Powell County, Hydrologic Unit 05100204, on right bank 25 ft upstream from bridge on State Highway 15, 0.1 mi downstream from Skinner Branch, 0.4 mi upstream from Brush Creek, 0.5 mi west of Clay City, and at mile 21.6.

DRAINAGE AREA.--362 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to March 1932, April 1938 to current year. Monthly discharge only for October 1930, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1931-32. WSP 1385: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 600.47 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Aug. 14, 1939, nonrecording gages, Aug. 14, 1939, to Aug. 13, 1975, water-stage recorder at site 50 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 10-13. Water-discharge records good. Flow diversions by Clay City Water Plant which can be significant during low-flow periods. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--52 years (Water years 1931, 1939-89), 482 ft^3/s, 18.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft^3/s, Dec. 9, 1978, gage height, 26.75 ft; minimum, 1.2 ft^3/s, Aug. 10-12, 1944, Aug. 7, 8, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	1000	11,000	18.80	Feb. 16	0500	*17,300	*22.03
Dec. 25	2300	5,830	14.77	Feb. 22	0600	11,000	18.81
Feb. 4	1400	10,800	18.69	Mar. 7	0200	9,090	18.25

Minimum discharge, 15 ft^3/s, Oct. 15-17, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	38	420	772	368	628	1000	211	263	164	158	122
2	57	36	342	696	346	547	824	224	234	136	111	108
3	49	35	294	590	3490	508	1110	209	210	119	150	112
4	43	37	245	521	9300	479	2110	185	237	110	102	106
5	38	149	212	429	6670	2150	3100	300	288	104	71	78
6	33	389	188	522	1730	6440	1670	499	415	99	196	61
7	29	354	173	694	1050	8220	1170	472	328	87	258	51
8	24	326	162	1160	811	4170	1020	429	257	81	169	44
9	22	247	149	967	632	1290	1160	1410	1020	64	111	39
10	21	313	135	762	413	1020	990	4040	448	54	75	35
11	19	600	124	653	370	868	842	2870	288	47	55	35
12	18	436	111	1290	353	736	721	1170	217	40	42	38
13	17	310	97	2470	1150	677	616	855	566	36	34	34
14	17	256	106	1830	5200	806	537	681	722	42	29	219
15	16	196	106	2310	12200	702	622	595	1360	36	25	575
16	15	167	103	1730	15400	585	649	651	2890	29	28	2180
17	16	237	91	1180	8790	514	535	562	1680	25	133	2170
18	16	272	84	913	3820	510	480	470	939	22	996	1060
19	16	2290	80	738	1490	588	458	396	641	42	809	548
20	18	6570	78	601	1190	555	424	562	641	453	308	360
21	22	10000	720	500	5310	2260	379	560	775	424	184	275
22	44	4370	1660	415	9730	3050	350	512	673	208	197	329
23	77	939	2030	371	4800	1550	326	1410	581	118	194	1690
24	88	650	3270	341	1470	1140	306	2940	579	82	299	2540
25	110	493	5060	317	1100	936	294	1480	400	86	992	1170
26	85	397	3560	296	983	775	275	888	309	77	777	749
27	63	434	1140	288	875	657	257	744	247	55	398	612
28	51	508	1170	264	740	572	235	626	204	42	248	425
29	44	565	1300	241	---	524	219	467	259	42	176	325
30	41	501	1020	270	---	539	211	374	220	57	133	275
31	40	---	842	379	---	938	---	307	---	191	119	---
TOTAL	1218	32115	25072	24510	99781	44934	22890	27099	17891	3172	7577	16365
MEAN	39.3	1070	809	791	3564	1449	763	874	596	102	244	545
MAX	110	10000	5060	2470	15400	8220	3100	4040	2890	453	996	2540
MIN	15	35	78	241	346	479	211	185	204	22	25	34
CFSM	.11	2.96	2.23	2.18	9.84	4.00	2.11	2.41	1.65	.28	.68	1.51
IN.	.13	3.30	2.58	2.52	10.25	4.62	2.35	2.78	1.84	.33	.78	1.68

CAL YR 1988 TOTAL 145034.3 MEAN 396 MAX 10000 MIN 7.3 CFSM 1.09 IN. 14.90
WTR YR 1989 TOTAL 322624 MEAN 884 MAX 15400 MIN 15 CFSM 2.44 IN. 33.15

03283500 RED RIVER AT CLAY CITY, KY--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--1965-79 and October 1987 to current year.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality section.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOL (C6H5OH) TOTAL (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)
FEB 1989											
15...	1040	13200	5.80	--	--	10	<5.0	<0.20	<0.20	<0.20	<0.20
JUN											
09...	1120	3320	7.82	19.0	22.5	21	<5.0	<0.20	<0.20	<0.20	<0.20

DATE	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
FEB 1989											
15...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
09...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
FEB 1989											
15...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
09...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHOCRESOL TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)
FEB 1989											
15...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20
JUN											
09...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20

DATE	CIS 1,3-DICHLOROPROPENE TOTAL (UG/L)	PENTACHLOROPHENOL TOTAL (UG/L)	STYRENE TOTAL (UG/L)	123-TRI CHLOROPROPANE WATER WHOLE TOTAL (UG/L)	TRICHLOROETHYLENE TOTAL (UG/L)	VINYL CHLORIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	BROMOBENZENE WATER, WHOLE, TOTAL (UG/L)	1,1-DI CHLOROPROPENE, WAT, WH TOTAL (UG/L)	2,2-DI CHLOROPROPANE WAT, WH TOTAL (UG/L)	1,3-DI CHLOROPROPANE, WAT. WH TOTAL (UG/L)
FEB 1989											
15...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--
JUN											
09...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.20

03283500 RED RIVER AT CLAY CITY, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ORTHO-CHLOROTOLUENE WATER, WHOLE, TOTAL (UG/L)	PARA-CHLOROTOLUENE WATER, WHOLE, TOTAL (UG/L)	1,1,1,2 TETRACHLOROETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	1,2-DICHLOROETHENE WATER WHOLE RECOVER (UG/L)	DIAZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALATHION, TOTAL (UG/L)	METHYL TRITHION, TOTAL (UG/L)	METHYL PARATHION, TOTAL (UG/L)	PARATHION, TOTAL (UG/L)
FEB 1989											
15...	--	--	--	<0.2	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN											
09...	<0.20	<0.20	<0.20	<0.2	<0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	TOTAL TRITHION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	ALACHLOR TOTAL RECOVER (UG/L)	CYANAZINE TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	PICLORAM (TORDON) (AMDON) TOTAL (UG/L)	DICAMBA (MEDIBEN) (BANVEL D) TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
FEB 1989											
15...	<0.01	<0.01	<0.01	<0.50	<0.01	<0.10	<0.10	<0.10	<0.01	0.01	<0.01
JUN											
09...	<0.01	<0.01	<0.01	--	<0.01	<0.10	0.10	0.30	<0.01	<0.01	<0.01

DATE	AMETRYNE TOTAL	METRIBUZIN WATER WHOLE TOT.REC (UG/L)	METOLACHLOR WATER WHOLE TOT.REC (UG/L)	PROPAZINE TOTAL (UG/L)	TRIFLURALIN TOTAL RECOVER (UG/L)	METHOMYL TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SIMETRYNE TOTAL (UG/L)	SIMAZINE TOTAL (UG/L)	PROMETONE TOTAL (UG/L)	PROMETRYNE TOTAL (UG/L)
FEB 1989											
15...	<0.10	<0.1	<0.1	<0.10	<0.10	<0.5	<0.5	<0.1	<0.10	<0.1	<0.1
JUN											
09...	<0.10	<0.1	<0.1	<0.10	<0.10	--	--	<0.1	0.10	<0.1	<0.1

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	1430	11.5	21.0	245	7.98	70	7.0	<0.10	<0.1	<0.1	<0.1	<0.1

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	<0.1	<0.1	<0.1	<0.1	<5.0	<0.1	<0.1	<1.0	<1.0	<1.0	<1.0	<1.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

03283500 RED RIVER AT CLAY CITY, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHOCRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYLHEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	1700	280	<2500	<250	<250

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY

LOCATION.--Lat 37°53'41", long 84°15'44", Madison County, Hydrologic Unit 05100205, on left bank at lock 10, 0.9 mi downstream from Otter Creek, 8.0 mi southwest of Winchester, and at mile 176.4.

DRAINAGE AREA.--3,955 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1907 to current year.

REVISED RECORDS.--WSP 1275: 1908-52. 1955: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 557.37 ft Ohio River datum. Feb. 2, 1940 to Aug. 10, 1943, water-stage recorder 1.1 mi upstream at different datum. Aug. 11, 1943 to June 12, 1978, nonrecording gage at present site and datum. Auxiliary gage is upper nonrecording gage at lock 9, at Valley View, 18.9 mi downstream.

REMARKS.--Estimated daily discharges: Oct. 18 and Jan. 20-22. Water discharge records good above 1,000 ft^3/s and fair below. Flow regulated since January 1976 by Carr Fork Lake (station 03277446), since December 1960 by Buckhorn Lake (station 03280800).

AVERAGE DISCHARGE.--82 years, 5,230 ft^3/s, 17.96 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 101,000 ft^3/s, Dec. 10, 1978; gage height, 40.15 ft, from high-water mark; minimum, less than 10 ft^3/s, estimated in October 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74,600 ft^3/s, Feb. 16, gage height, 28.66 ft; minimum daily, 162 ft^3/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	590	334	4530	6910	3300	8970	8080	6180	3700	6700	1650	1770
2	483	310	3720	6000	3280	8050	7210	9090	3260	5200	2090	1890
3	411	301	2970	5350	23400	7350	8020	13400	2990	4810	2500	1860
4	356	310	2420	4780	32900	6590	15100	13000	3030	4740	2430	1960
5	319	488	2390	4020	26700	16400	23200	9680	3130	4170	2130	1880
6	285	1170	2300	4450	19600	42800	21900	9060	4010	4210	2330	1580
7	261	2130	2010	5800	11600	53700	15800	18900	4390	6560	2380	1290
8	239	2400	1760	12400	8750	56100	11900	22200	6160	9460	2950	1090
9	224	2000	1640	11900	6890	41200	10900	22800	17000	6590	2510	944
10	214	2160	1520	11800	5690	16800	9250	28900	10000	6130	1860	848
11	211	3380	1380	10100	5010	12800	7870	26300	11100	4760	1370	793
12	198	3310	1230	12200	4440	10900	6710	18500	9350	3140	1080	774
13	199	2900	1160	23100	10000	9720	5780	12800	12000	2540	890	799
14	192	2440	1150	32000	37700	10200	5130	9150	15900	2050	778	3340
15	190	2020	1180	28900	60200	10200	5020	7080	21200	1800	701	7160
16	188	1710	1170	24200	73600	9340	5290	6550	31100	1620	665	20800
17	185	1700	1130	21400	65400	8310	5070	7020	40100	1430	849	23300
18	170	1920	1100	15700	39700	7460	4680	6270	44800	1270	4350	14100
19	162	13100	1070	11800	20100	6420	4390	5330	36700	1370	6100	7380
20	164	37100	1050	9530	15400	5630	4120	5820	20100	2940	3980	4310
21	183	36100	2380	7850	40900	14200	3810	5820	14000	2970	2530	3220
22	206	23000	7680	6460	51300	24700	3530	6790	12200	2450	2180	2960
23	235	10800	13900	5220	51100	21100	3260	15700	11200	1830	1920	11800
24	280	6240	22400	4250	32500	15300	3050	26100	10900	1440	2390	19700
25	314	5030	36100	3450	16500	12500	2900	15700	9620	1290	5960	15400
26	387	3950	32900	3110	13600	10600	2800	9990	8390	1200	6150	9720
27	505	3570	17100	3040	11800	8590	2790	8540	7550	1050	3760	7000
28	538	3870	12300	2920	10200	7410	2600	7600	8140	940	2620	6020
29	476	5000	12700	2690	---	6620	3710	7460	10300	889	2090	5100
30	414	5430	10800	2660	---	6080	5040	6150	9160	1110	1780	4150
31	369	---	8190	3080	---	7180	---	4560	---	1430	1790	---
TOTAL	9149	184173	213330	307070	701560	483220	218910	372440	401480	98089	76763	182938
MEAN	295	6139	6882	9905	25060	15590	7297	12010	13380	3164	2476	6098
MAX	590	37100	36100	32000	73600	56100	23200	28900	44800	9460	6150	23300
MIN	162	301	1050	2660	3280	5630	2600	4560	2990	889	665	774

CAL YR 1988 TOTAL 1099252 MEAN 3003 MAX 37100 MIN 121
WTR YR 1989 TOTAL 3249122 MEAN 8902 MAX 73600 MIN 162

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 1988												
17...	1130	191	533	7.67	22.0	18.5	7.1	77	K10	K10	200	120
NOV												
14...	1500	2330	508	7.88	16.5	12.0	10.1	96	K200	580	200	100
21...	1400	65100	269	6.90	17.0	10.5	8.2	74	--	--	100	53
DEC												
19...	1140	619	333	7.92	16.0	5.5	12.3	100	K2	K2	140	71
JAN 1989												
13...	1630	26600	270	7.80	4.0	8.0	11.5	99	--	--	100	50
17...	1430	21800	191	7.53	12.0	7.0	11.4	95	2500	2000	81	36
FEB												
15...	2100	77600	160	8.38	10.5	7.5	11.8	102	--	--	69	26
22...	1400	51300	115	7.29	8.0	7.0	12.5	105	--	--	52	27
MAR												
20...	1200	5230	258	7.74	13.5	10.5	11.8	108	K170	64	120	72
APR												
17...	1245	5270	261	7.61	25.5	17.5	10.4	111	--	K36	120	62
MAY												
11...	1345	24500	206	8.71	17.0	14.0	10.4	103	--	--	84	43
15...	1245	6460	221	7.54	18.0	15.5	10.5	108	K120	830	95	51
24...	1430	24000	296	7.54	23.0	17.0	9.1	97	--	--	120	74
JUN												
17...	1000	36400	188	7.44	25.0	18.5	8.9	97	--	--	77	37
19...	1430	36500	188	7.18	26.0	21.0	9.6	110	990	>20000	81	41
JUL												
10...	1200	6430	335	7.33	30.5	28.0	7.8	103	K86	8900	140	87
AUG												
21...	1200	2580	375	8.47	28.0	25.0	7.9	98	K190	K290	150	86

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 1988												
17...	47	19	31	25	1	4.1	75	91	--	75	120	40
NOV												
14...	49	18	28	23	0.9	3.6	98	120	--	97	93	44
21...	27	8.5	12	20	0.5	2.8	50	61	--	50	48	19
DEC												
19...	34	13	14	18	0.5	2.4	66	81	--	68	68	16
JAN 1989												
13...	26	9.2	6.1	11	0.3	2.0	52	64	--	53	59	7.4
17...	20	7.5	4.6	11	0.2	1.8	43	53	--	45	49	5.1
FEB												
15...	19	5.2	3.8	10	0.2	2.0	43	52	--	43	26	6.7
22...	13	4.6	3.5	12	0.2	1.6	25	30	--	25	30	4.9
MAR												
20...	28	12	6.8	11	0.3	1.9	42	51	--	41	66	6.5
APR												
17...	29	11	7.0	11	0.3	1.8	57	69	--	56	61	7.3
MAY												
11...	21	7.7	6.5	14	0.3	1.6	65	57	11	65	42	8.7
15...	23	9.0	5.6	11	0.3	1.8	43	53	--	44	52	5.6
24...	29	12	7.9	12	0.3	2.2	47	57	--	46	76	6.3
JUN												
17...	19	7.1	5.2	13	0.3	1.8	36	44	--	34	40	5.7
19...	20	7.4	3.3	8	0.2	2.0	48	59	--	48	43	2.4
JUL												
10...	32	14	10	13	0.4	2.7	50	61	--	49	98	9.6
AUG												
21...	37	14	15	17	0.6	3.4	73	89	--	74	88	18

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	BROMIDE DIS- SOLVED (MG/L AS BR)	IODIDE, DIS- SOLVED (MG/L AS I)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1988												
17...	0.21	0.007	4.3	327	313	0.44	169	0.39	0.03	0.04	0.42	0.4
NOV												
14...	0.25	0.005	5.5	306	302	0.42	1930	0.37	0.01	0.04	0.38	1.1
21...	0.10	0.003	5.0	166	156	0.23	29200	0.48	0.04	0.09	0.52	1.9
DEC												
19...	0.12	0.004	6.2	200	197	0.27	334	0.44	0.02	0.03	0.46	0.3
JAN 1989												
13...	0.027	0.002	6.4	157	150	0.21	11300	--	<0.01	0.03	0.40	0.4
17...	0.023	0.002	7.0	108	125	0.15	6360	--	<0.01	0.03	0.51	0.7
FEB												
15...	0.025	--	4.7	101	96	0.14	21200	0.43	0.02	<0.01	0.45	1.1
22...	0.017	0.013	5.1	78	80	0.11	10800	--	<0.01	0.02	0.30	1.1
MAR												
20...	<0.010	0.004	6.5	164	159	0.22	2320	0.38	0.02	0.03	0.40	0.4
APR												
17...	<0.060	0.003	6.9	158	160	0.21	2250	0.27	0.01	0.04	0.28	<0.2
MAY												
11...	0.020	0.047	6.7	132	121	0.18	8730	--	<0.01	0.02	0.29	0.3
15...	0.030	0.009	7.1	124	132	0.17	2160	--	<0.01	0.02	0.27	0.3
24...	0.020	0.024	6.4	169	171	0.23	11000	--	<0.01	0.04	0.30	0.4
JUN												
17...	0.020	0.010	7.6	107	112	0.15	10500	--	<0.01	0.04	0.31	0.5
19...	<0.010	0.004	7.6	121	112	0.16	11900	--	<0.01	0.04	0.33	0.2
JUL												
10...	0.060	0.005	7.2	223	207	0.30	3870	--	<0.01	0.04	0.43	0.3
AUG												
21...	0.12	0.007	5.5	203	222	0.28	1410	0.39	0.01	0.04	0.40	0.4

DATE	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 1988												
17...	0.01	0.02	0.01	<10	<1	76	<0.5	40	0.6	0.7	<3	2.2
NOV												
14...	0.04	0.02	0.04	<10	<1	96	<0.5	30	0.2	0.5	<3	<0.5
21...	0.04	0.04	0.04	50	1	50	<0.5	30	<0.1	<0.5	<3	2.7
DEC												
19...	0.02	<0.01	0.02	<10	<1	48	<0.5	10	0.3	<0.5	<3	1.9
JAN 1989												
13...	0.03	0.02	0.03	70	<1	24	<0.5	10	<0.1	<0.5	<3	1.2
17...	0.03	0.02	0.03	90	<1	29	<0.5	<10	0.2	<0.5	<3	1.9
FEB												
15...	0.44	0.02	0.44	140	<1	16	<0.5	10	1.3	2.5	<3	3.5
22...	0.34	0.01	0.34	80	1	17	<0.5	<10	0.3	<0.5	<3	1.0
MAR												
20...	0.04	0.02	0.04	20	<1	32	<0.5	<10	0.3	<0.5	<3	1.3
APR												
17...	0.03	<0.01	0.03	170	<1	32	<0.5	10	<0.2	<0.5	<3	0.7
MAY												
11...	0.11	<0.01	0.11	50	<1	25	<0.5	<10	0.3	<0.5	<3	2.8
15...	0.04	0.01	0.04	20	<1	26	<0.5	<10	0.1	<0.5	<3	0.8
24...	0.03	0.02	0.03	40	<1	31	<0.5	30	0.2	<0.5	<3	3.6
JUN												
17...	0.06	<0.01	0.06	40	<1	22	<0.5	20	<0.1	<0.5	<3	<0.5
19...	<0.01	<0.01	--	40	<1	27	<0.5	30	0.2	1.1	<3	<0.5
JUL												
10...	0.02	0.02	0.02	20	<1	39	<0.5	20	2.9	<0.5	<3	2.0
AUG												
21...	0.05	0.01	0.05	20	<1	45	<0.5	40	0.4	<0.5	<3	3.3

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988												
17...	26	<0.5	8	26	<10	<10	<1.0	610	<6	6	3.0	0.2
NOV												
14...	23	<0.5	7	11	<10	<10	<1.0	620	<6	11	3.0	0.2
21...	110	<0.5	<4	350	<10	<10	<1.0	270	<6	9	2.8	>2.6
DEC												
19...	21	<0.5	4	140	<10	<10	<1.0	290	<6	5	1.6	0.2
JAN 1989												
13...	79	<0.5	7	48	<10	<10	<1.0	150	<6	11	2.5	4.5
17...	88	<0.5	5	25	<10	<10	<1.0	120	<6	<3	1.8	2.6
FEB												
15...	120	2.6	<4	65	<10	<10	<1.0	90	<6	82	3.4	>2.5
20...	130	<0.5	<4	99	<10	<10	<1.0	83	<6	4	2.9	>2.5
MAR												
20...	41	<0.5	<4	61	<10	<10	<1.0	190	<6	10	1.7	0.5
APR												
17...	350	<0.5	4	93	<10	<10	<1.0	200	<6	<3	1.9	0.5
MAY												
11...	68	<0.5	8	10	<10	<10	2.0	170	<6	7	3.2	1.7
15...	42	<0.5	6	21	<10	<10	<1.0	170	<6	<3	2.0	0.4
24...	50	<0.5	9	4	<10	<10	<1.0	230	<6	17	2.8	>2.5
JUN												
17...	54	<0.5	<4	12	<10	<10	<1.0	140	<6	4	2.9	>2.5
19...	85	<0.5	<4	39	<10	<10	<1.0	120	<6	5	3.0	--
JUL												
10...	50	<0.5	6	25	<10	<10	1.0	330	<6	9	2.9	0.4
AUG												
21...	34	<0.5	6	9	<10	<10	<1.0	410	<6	30	3.3	0.1

DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988											
17...	1130	0.10	<1	<1	0.9	<0.4	6.8	0.4	5.1	0.4	<0.01
NOV											
21...	1400	0.10	<1	<1	<0.4	12	3.6	18	2.8	16	<0.01
JAN 1989											
13...	1630	0.10	<1	1	<0.4	6.3	2.3	8.3	1.7	7.3	<0.01
17...	1430	0.10	<1	<1	<0.4	15	1.9	11	1.6	9.2	<0.01
FEB											
15...	2100	0.10	<1	<1	<0.4	30	2.2	20	1.9	18	<0.01
APR											
17...	1245	0.10	<1	<1	<0.4	0.7	1.6	0.8	1.5	0.8	<0.01
MAY											
11...	1345	0.10	<1	<1	0.5	10	2.4	7.7	2.0	6.8	<0.01
24...	1430	0.10	<1	<1	1.1	18	2.8	18	2.1	16	<0.01
JUN											
17...	1000	0.10	<1	<1	<0.4	48	2.3	28	1.8	25	<0.01
JUL											
10...	1200	0.10	<1	<1	<0.4	1.7	4.1	2.8	3.1	2.6	<0.01

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1988								
21...	1400	11000	200	<10	60	<1	14	20
JAN 1989								
13...	1630	3600	<100	<10	50	1	6	10
FEB								
15...	2100	5300	100	<10	20	<1	9	10
MAY								
11...	1345	2500	<100	<10	80	2	4	20
24...	1430	4800	100	<10	40	1	8	20
JUN								
17...	1000	9900	<100	<10	30	<1	12	30

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 1988							
21...	19000	7	1000	6	29	<1	90
JAN 1989							
13...	7000	<5	370	3	11	<1	30
FEB							
15...	11000	16	570	4	16	1	80
MAY							
11...	5500	10	240	2	10	<1	20
24...	11000	16	470	4	17	<1	60
JUN							
17...	19000	21	670	<1	23	<1	90

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
15...	1415	11.5	20.0	505	8.20	840	33	<2.5	<2.5	<2.5	10.4	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
15...	<2.5	<0.25	<2.5	13	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

03284000 KENTUCKY RIVER AT LOCK 10, NEAR WINCHESTER, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
15...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<250	<500	<250	<250	<250	8800	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHOCRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYLHEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
15...	<250	<250	<1500	<1500	<250	<1500	1200	<250	<2500	<250	<250

KENTUCKY RIVER BASIN

03285000 DIX RIVER NEAR DANVILLE, KY

LOCATION.--Lat 37°38'31", long 84°39'39", Garrard County, Hydrologic Unit 05100205, on right bank 50 ft downstream from bridge on State Highway 52, 1.4 mi downstream from Hanging Fork, 6 mi east of Danville, and at mile 34.6.

DRAINAGE AREA.--318 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to August 1905 (gage heights only), October 1942 to current year. Published as "Dicks River," 1905.

REVISED RECORDS.--WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 750.10 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 16, 1942, nonrecording gage at same site and datum. May to August 1905, nonrecording gage at site 6 mi downstream at different datum. Auxiliary nonrecording gage at site 2 mi downstream from base gage read during periods of possible backwater.

REMARKS.--Estimated daily discharges: Feb. 9-12. Water-discharge records good.

AVERAGE DISCHARGE.--47 years, 464 ft^3/s, 19.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,400 ft^3/s, Dec. 9, 1978, gage height, 21.81; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1400	15,000	12.09	Feb. 15	1900	*18,400	*13.18
Dec. 24	1800	9,690	10.08	Feb. 21	1000	14,400	11.88
Feb. 3	1700	10,700	10.51	Mar. 6	0500	12,400	11.17

Minimum daily discharge, 6.6 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	27	342	594	295	656	921	140	64	82	539	44
2	53	35	280	507	251	356	553	207	54	71	144	34
3	53	32	233	426	7030	284	781	169	56	65	93	27
4	45	39	205	366	5790	255	3500	127	69	58	53	26
5	34	249	177	299	1510	3990	2490	271	79	630	33	22
6	27	414	158	1070	1030	9860	1310	618	211	249	65	19
7	22	307	146	1160	736	6720	938	430	220	138	194	15
8	19	224	131	1890	536	6460	772	268	126	95	107	12
9	17	165	118	1310	381	5580	691	613	2240	69	60	11
10	15	732	106	843	227	4430	502	1520	962	52	38	9.1
11	13	988	97	652	246	3250	407	646	395	40	26	8.6
12	11	421	84	2760	248	2200	344	394	637	30	19	8.0
13	9.3	306	77	2910	2240	1360	296	291	3260	27	15	6.7
14	7.2	310	76	1610	12200	944	253	235	1560	32	12	6.6
15	7.0	233	76	2680	14700	597	297	202	3550	27	9.9	147
16	7.9	196	72	1420	11000	384	385	176	3820	22	7.8	1330
17	8.3	212	66	953	3370	318	280	146	1430	18	8.8	684
18	7.2	221	59	703	2850	300	225	123	811	16	724	269
19	7.4	4030	56	528	2490	301	195	106	519	14	225	157
20	8.5	11600	54	419	2340	289	172	140	404	174	91	108
21	10	4990	782	335	11900	3120	155	255	322	146	55	80
22	12	1120	1980	281	10000	1680	139	202	254	84	44	71
23	14	711	2470	250	9640	942	128	787	220	55	52	3040
24	18	488	5480	223	4810	690	127	559	384	36	151	1500
25	23	374	4070	204	3790	527	119	288	215	27	1100	630
26	26	296	1260	169	2850	422	115	270	151	21	715	406
27	25	839	836	211	1970	351	154	248	120	17	286	308
28	23	890	1410	202	1190	298	170	157	97	13	161	218
29	22	567	1610	177	---	261	123	120	82	11	107	176
30	20	427	935	203	---	327	104	95	107	9.1	76	167
31	22	---	675	386	---	794	---	76	---	7.5	56	---
TOTAL	647.8	31443	24121	25771	115620	57946	16646	9879	22419	2335.6	5267.5	9540.0
MEAN	20.9	1048	778	831	4129	1869	555	319	747	75.3	170	318
MAX	61	11600	5480	2910	14700	9860	3500	1520	3820	630	1100	3040
MIN	7.0	27	54	177	227	255	104	76	54	7.5	7.8	6.6
CFSM	.07	3.30	2.45	2.61	13.0	5.88	1.74	1.00	2.35	.24	.53	1.00
IN.	.08	3.68	2.82	3.01	13.53	6.78	1.95	1.16	2.62	.27	.62	1.12

CAL YR 1988 TOTAL 126831.17 MEAN 347 MAX 11600 MIN .00 CFSM 1.09 IN. 14.84
WTR YR 1989 TOTAL 321635.9 MEAN 881 MAX 14700 MIN 6.6 CFSM 2.77 IN. 37.63

03285000 DIX RIVER NEAR DANVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1988.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
16...	1220	15.0	18.0	415	8.55	550	29	<2.5	<2.5	<2.5	<2.5	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
16...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
16...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
16...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
16...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

03285000 DIX RIVER NEAR DANVILLE, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHOCRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYLHEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
16...	<250	<250	<1500	<1500	<250	<1500	2000	<250	<2500	<250	<250

03287000 KENTUCKY RIVER AT LOCK 6, NEAR SALVISA, KY

LOCATION.--Lat 37°55'32", long 84°49'17", Woodford County, Hydrologic Unit 05100205, on right bank at lock 6, 1.5 mi upstream from Clear Creek, 2.1 mi east of Salvisa, and at mile 96.2.

DRAINAGE AREA.--5,102 mi^2, of which about 101 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1925 to current year. Prior to October 1953, published as "at lock 6, at Warwick."

REVISED RECORDS.--WSP 1385: 1926-27, 1928(M), 1929, 1931(M), 1932, 1933-34(M), 1935, 1937, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 487.89 ft Kentucky River datum. Prior to November 1934, nonrecording gage at same site and datum. Auxiliary water-stage recorder at lock 5, 14 mi downstream. Prior to Sept. 30, 1981, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: June 5, 6. Records good above 1000 ft^3/s and poor below. Flow regulated since January 1976 by Carr Fork Lake (station 03277446), since December 1960 by Buckhorn Lake (station 03280800), since November 1925 by Herrington Lake (station 03286000), and by hydroelectric plant at lock 7. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--64 years, 6,667 ft^3/s, 17.75 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft^3/s, Dec. 10, 1978, gage height, 49.04 ft, from floodmarks; minimum daily, about 15 ft^3/s, Aug. 27, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 105,000 ft^3/s, Feb. 16, gage height, 41.82 ft; minimum daily, 200 ft^3/s, Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	570	6670	10400	3670	11900	11000	4940	4370	7760	1940	1700
2	1010	524	4910	9080	3890	11000	10200	6760	3600	5250	1940	2750
3	864	462	3720	7720	22700	9820	9770	10400	3250	4180	2200	2750
4	734	469	2920	6220	43700	9200	16600	13200	3280	3910	2300	2780
5	569	654	2350	5280	35700	18400	25300	11400	3600	4200	2620	2780
6	286	1260	3230	5370	26800	53000	26400	8800	4000	4260	3360	2730
7	262	1860	3030	6980	18500	54000	21200	11900	4450	4630	3170	2430
8	290	2400	2610	17400	13100	57400	16000	20500	4330	7880	2700	1840
9	208	2570	2180	18000	10400	55200	13800	23500	12800	7800	2800	1970
10	201	2540	2090	15700	8650	31000	12400	33600	16100	6230	2490	1620
11	235	3390	1730	14100	7520	17200	10500	29400	10000	5820	1620	1560
12	211	3620	2020	15800	6770	14500	8970	23200	10900	4120	1180	1540
13	200	3230	1430	21100	9880	12900	7690	15800	15400	2950	882	1470
14	409	2960	1080	32900	56400	12600	6720	11300	17500	2320	811	1460
15	403	2470	1400	42800	85200	13100	6220	8810	25400	1600	668	3990
16	349	2110	1640	31200	105000	12500	6350	7290	34200	1880	547	13200
17	305	1690	1380	27000	93600	11400	6260	7120	38000	1320	700	24200
18	310	1710	1240	21700	73200	10100	5880	6990	43800	1280	1240	19500
19	367	14500	1320	16700	36500	8980	5540	5960	43100	1530	4430	11400
20	313	50700	1230	13400	20900	7880	5240	6580	30200	3190	4870	6810
21	383	49700	1950	11300	44900	12000	4920	6820	17500	3460	3170	4040
22	351	35100	6130	9260	66600	18900	4640	6670	14500	3130	2510	3240
23	390	20200	15600	8010	59600	22500	4350	10700	12800	2530	2240	7760
24	526	10900	29100	6840	50500	20400	4090	24500	12100	1870	2360	20000
25	528	7450	41400	5900	26000	15900	3890	22100	10700	1430	3490	19400
26	677	5970	41200	5300	17400	13600	3730	13100	9140	1240	6490	13500
27	670	5280	29300	4010	15400	11400	4220	10300	8750	1080	5010	8820
28	715	5740	17400	3560	13400	9600	4180	8350	8150	960	3170	6760
29	747	6070	17800	3510	---	8470	3100	7500	9770	857	2530	5800
30	625	6980	15800	3310	---	7950	3900	7020	9420	856	1670	4940
31	685	---	12800	3440	---	8900	---	5700	---	1260	1190	---
TOTAL	15043	253079	276660	403290	975880	581700	273060	390210	441110	100783	76298	202740
MEAN	485	8436	8925	13010	34850	18760	9102	12590	14700	3251	2461	6758
MAX	1220	50700	41400	42800	105000	57400	26400	33600	43800	7880	6490	24200
MIN	200	462	1080	3310	3670	7880	3100	4940	3250	856	547	1460

CAL YR 1988 TOTAL 1428494 MEAN 3903 MAX 50700 MIN 96
WTR YR 1989 TOTAL 3989853 MEAN 10930 MAX 105000 MIN 200

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY

LOCATION.--Lat 38°12'06", long 84°52'54", Franklin County, Hydrologic Unit 05100205, on left bank at downstream side of Broadway Street Bridge at Frankfort, 300 ft upstream from Benson Creek, 0.8 mi upstream from lock 4, and at mile 65.8. Records include flow of Benson Creek.

DRAINAGE AREA.--5,411 mi^2, (includes that of Benson Creek), of which about 120 mi^2 does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1905 to July 1906 (gage heights only), October 1925 to current year. Monthly discharge only October 1930 to February 1931, October, November 1931, and May to September 1932, published in WSP 1305. Gage-height records collected in this vicinity September 1887 to December 1889, January to May 1893, and since April 1901 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 1113: 1941-42. WSP 1385: 1926-27, 1929(M), 1932-33, 1935-37, 1938(M), drainage area. WSP 1555: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 462.10 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 27, 1939, nonrecording gage at lock 4, 0.9 mi downstream at same datum. Auxiliary water-stage recorder at lock 5, at Tyrone, 16.3 mi upstream. Prior to Jan. 28, 1982, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Sept. 17, 18, 24-26. Water-discharge records good above 1,000 ft^3/s and poor below. Flow regulated since January 1976 by Carr Fork Lake (station 03277446), since December 1960 by Buckhorn Lake (station 03280800), since November 1925 by Herrington Lake (station 03286000), and by hydroelectric plant at lock 7.

AVERAGE DISCHARGE.--64 years, 7,024 ft^3/s, 17.63 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 118,000 ft^3/s, Dec. 9, 1978; maximum gage height, 48.47 ft, Dec. 10, 1978; minimum daily discharge about 15 ft^3/s, Sept. 10, 11, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 106,000 ft^3/s, Feb. 16, maximum gage height, 44.17 ft; minimum daily discharge, 259 ft^3/s, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	715	7260	10800	3820	12000	12200	5000	5030	8380	2000	1250
2	1100	568	5590	9440	4010	11000	11300	6390	4030	6000	2130	2810
3	876	528	4220	8350	20000	10200	10500	9140	3510	4540	2210	2840
4	814	559	3230	6900	42700	9460	16200	12100	3490	4270	2380	2860
5	641	650	2740	5880	37700	17500	23900	11600	3950	4510	2580	2880
6	616	1010	3430	6040	27600	52400	25500	9370	4210	4680	4910	2810
7	527	1780	3220	7450	18900	56200	22200	9790	4880	4520	4080	2530
8	516	2320	2720	16200	13300	56600	17000	17200	4600	7100	2980	2020
9	472	2750	2270	18500	10800	57100	14500	21600	8180	8870	2990	2110
10	438	2680	2090	15500	8990	43500	13100	33000	16800	6620	2750	1890
11	441	3550	1950	14300	7980	17400	11500	29000	10200	6360	2090	1600
12	407	4010	1850	17600	7200	14300	9920	23000	10400	4930	1580	1710
13	371	3630	1850	19500	12000	12800	8630	16100	12500	3340	1180	1620
14	259	3170	1640	30400	51600	12300	7690	11800	16600	2540	911	1470
15	440	2800	1570	43600	79900	12400	7150	9370	22000	2030	840	3010
16	376	2350	1630	34400	102000	12100	7070	7990	32800	1870	679	9660
17	359	1870	1660	27700	97400	11200	7070	7360	33300	1740	907	18200
18	351	1770	1320	22800	79300	10300	6740	7420	38400	1230	1130	18400
19	338	10200	1140	17700	55200	9390	6460	6550	40800	1680	3660	13700
20	334	42500	1090	14400	33000	9060	6080	7500	32500	3340	5520	8550
21	383	52300	1570	12300	39000	17400	5710	7590	17900	3880	3900	5240
22	388	39800	5080	10400	59000	22800	5400	7000	13900	3500	2770	4190
23	444	21500	13200	8800	58000	26200	5100	10300	12300	2910	2480	7340
24	475	12000	27500	7670	52700	20300	4820	19300	11800	2180	2480	16200
25	518	8300	39900	6600	31100	15700	4600	22400	10700	1790	3470	17000
26	602	6630	39200	5790	17300	13500	4430	14200	9370	1450	6140	13800
27	651	6400	30800	4690	15100	11700	4620	10600	8690	1400	6050	9660
28	664	6190	19200	3800	13500	10100	4800	8990	8490	1130	3820	7370
29	761	6650	17300	3750	---	9090	3660	7860	9110	1000	2890	6320
30	666	7340	15400	3550	---	9470	3740	7370	9440	1000	2100	5500
31	505	---	13000	3570	---	11500	---	6400	---	1270	1680	---
TOTAL	17263	256520	274620	418380	999100	614970	291590	383290	419880	110060	85287	194540
MEAN	557	8551	8859	13500	35680	19840	9720	12360	14000	3550	2751	6485
MAX	1530	52300	39900	43600	102000	57100	25500	33000	40800	8870	6140	18400
MIN	259	528	1090	3550	3820	9060	3660	5000	3490	1000	679	1250

CAL YR 1988 TOTAL 1551680 MEAN 4240 MAX 52300 MIN 93
WTR YR 1989 TOTAL 4065500 MEAN 11140 MAX 102000 MIN 259

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1949 to September 1973, and April 1987 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1949 to September 1974.
SUSPENDED-SEDIMENT DISCHARGE: October 1952 to September 1973.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
OCT 1988												
18...	0930	361	504	7.60	17.0	16.5	7.9	82	190	93	50	15
NOV												
15...	1200	2910	568	8.25	16.0	13.0	9.8	95	220	100	58	17
21...	1200	58300	205	7.36	12.0	10.0	7.2	65	130	83	37	8.3
DEC												
20...	1145	1090	337	8.35	16.5	6.0	12.0	98	160	69	46	11
JAN 1989												
09...	1300	17800	286	7.90	2.0	7.0	11.6	96	130	43	40	7.7
14...	0845	29700	353	8.00	2.0	6.0	12.0	98	130	53	38	8.9
18...	1300	23500	222	7.87	15.0	7.5	11.4	97	100	40	29	7.2
FEB												
14...	1500	62100	238	8.56	8.0	6.5	11.9	99	120	41	35	7.2
16...	1745	109000	200	7.63	--	--	--	--	82	24	29	4.8
23...	1330	58000	178	7.92	-3.0	5.5	11.3	90	77	28	21	5.9
MAR												
21...	1400	17600	254	8.28	4.0	9.5	11.2	99	120	50	35	7.9
APR												
18...	1250	6870	244	6.87	23.0	16.0	10.7	111	110	42	31	8.1
MAY												
11...	1935	27000	227	8.04	17.0	13.5	12.3	120	110	37	31	7.9
16...	1410	7340	240	7.65	23.0	19.5	10.2	114	97	40	26	7.7
25...	1000	23000	326	7.92	23.0	18.0	8.9	97	140	70	38	12
JUN												
20...	1315	35300	164	7.52	26.5	23.5	8.5	103	70	31	19	5.4
JUL												
11...	1315	6460	256	7.41	32.5	25.5	7.6	94	110	52	28	8.9
AUG												
22...	1300	2810	347	7.86	32.0	26.5	7.1	90	160	68	43	12

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)
OCT 1988												
18...	29	25	1	3.6	98	119	--	95	81	47	0.29	4.4
NOV												
15...	32	24	1	4.0	116	141	--	116	99	52	0.28	4.0
21...	10	14	0.4	3.6	41	50	--	44	41	16	0.060	4.8
DEC												
20...	9.9	12	0.4	2.2	88	103	--	91	52	13	0.044	5.4
JAN 1989												
09...	6.4	9	0.3	2.2	88	107	--	89	38	9.2	0.042	5.6
14...	7.1	10	0.3	2.1	78	95	--	78	50	9.7	0.033	6.0
18...	4.3	8	0.2	1.9	62	76	--	62	43	5.5	0.017	6.4
FEB												
14...	5.3	9	0.2	2.1	77	94	--	76	40	5.8	0.013	5.4
16...	2.8	6	0.1	2.2	67	82	--	68	25	4.6	0.010	4.3
23...	4.0	10	0.2	1.6	48	58	--	49	36	4.8	0.022	5.6
MAR												
21...	4.9	8	0.2	1.9	63	73	2	64	52	5.5	<0.010	5.7
APR												
18...	4.9	9	0.2	1.7	66	81	--	63	41	5.8	0.030	5.6
MAY												
11...	3.8	7	0.2	2.0	76	93	--	76	36	3.2	<0.010	6.0
16...	4.4	9	0.2	1.7	57	70	--	59	41	4.1	0.010	6.7
25...	7.2	10	0.3	2.0	70	85	--	72	68	6.4	0.030	6.7
JUN												
20...	2.6	7	0.1	2.2	39	48	--	40	33	1.8	<0.010	6.5
JUL												
11...	5.5	10	0.2	2.1	55	67	--	54	53	5.8	0.020	6.3
AUG												
22...	9.6	12	0.3	2.9	92	112	--	92	70	10	0.050	4.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 1988											
18...	295	291	0.40	288	--	<0.01	0.03	0.54	0.5	0.07	0.04
NOV											
15...	334	340	0.45	2630	0.71	0.01	0.03	0.72	0.5	0.15	0.08
21...	166	152	0.23	26100	--	<0.01	0.07	1.00	2.5	1.00	0.05
DEC											
20...	187	200	0.25	550	1.18	0.02	0.02	1.20	0.3	0.07	0.05
JAN 1989											
09...	172	169	0.23	8270	1.19	0.01	0.08	1.20	0.7	0.19	0.11
14...	175	174	0.24	14000	--	<0.01	0.02	1.00	<0.2	0.09	0.06
18...	131	139	0.18	8240	--	<0.01	0.01	0.79	0.4	0.05	0.03
FEB											
14...	163	152	0.22	25100	--	<0.01	0.03	0.98	1.1	0.96	0.14
16...	112	118	0.15	30200	0.95	0.02	0.02	0.97	1.4	0.94	0.08
23...	105	111	0.14	16400	--	<0.01	0.02	0.51	0.7	0.35	0.02
MAR											
21...	156	159	0.21	7410	0.75	0.02	0.04	0.77	0.7	0.29	0.07
APR											
18...	147	143	0.20	2730	--	<0.01	0.02	0.65	0.2	0.08	0.04
MAY											
11...	136	136	0.18	9910	0.42	0.01	0.03	0.43	0.3	0.12	0.04
16...	129	128	0.18	2560	--	<0.01	0.04	0.37	<0.2	0.05	0.02
25...	179	188	0.24	11100	0.46	0.01	0.04	0.47	0.8	0.09	0.04
JUN											
20...	107	96	0.15	10200	0.42	0.03	0.04	0.45	0.3	0.47	0.05
JUL											
11...	150	146	0.20	2620	0.55	0.02	0.02	0.57	<0.2	0.04	0.02
AUG											
22...	221	208	0.30	1680	0.28	0.01	0.12	0.29	0.3	0.12	0.05

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PHOS-PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	BORON, DIS-SOLVED (UG/L AS B)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988											
18...	0.07	<10	1	61	<0.5	40	0.2	<5	<3	2.2	5
NOV											
15...	0.15	<10	<1	63	<0.5	40	2.8	<5	<3	<0.5	8
21...	1.0	60	1	32	<0.5	20	0.4	<0.5	<3	2.3	95
DEC											
20...	0.07	<10	1	42	<0.5	20	0.3	<0.5	<3	0.8	6
JAN 1989											
09...	0.19	20	<1	21	<0.5	20	0.3	<0.5	<3	1.1	23
14...	0.09	40	<1	24	<0.5	20	<0.1	<0.5	<3	1.4	52
18...	0.05	60	<1	23	<0.5	10	<0.1	<0.5	<3	0.9	140
FEB											
14...	0.96	80	<1	19	<0.5	10	0.2	2.1	<3	1.2	19
16...	0.94	80	1	16	<0.5	10	0.3	<0.5	<3	4.4	37
23...	0.35	90	<1	20	<0.5	<10	0.1	<0.5	<3	0.9	150
MAR											
21...	0.29	70	<1	22	<0.5	10	0.1	<0.5	<3	1.4	110
APR											
18...	0.08	30	<1	23	<0.5	10	<0.2	<0.5	<3	1.0	44
MAY											
11...	0.12	70	<1	21	<0.5	<10	0.3	<0.5	<3	2.3	100
16...	0.05	30	<1	22	<0.5	10	0.1	<0.5	<3	0.9	38
25...	0.09	40	<1	30	<0.5	10	<0.1	<0.5	<3	2.1	18
JUN											
20...	0.47	30	1	21	<0.5	20	0.5	<0.5	<3	1.3	45
JUL											
11...	0.04	20	<1	28	<0.5	20	0.5	0.7	<3	1.2	22
AUG											
22...	0.12	20	<1	37	<0.5	20	0.6	<0.5	<3	1.3	9

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1988											
18...	<0.5	7	3	<10	<10	<1.0	560	<6	8	3.2	0.3
NOV											
15...	<0.5	11	6	10	<10	<1.0	660	<6	12	2.6	0.2
21...	<0.5	4	72	<10	<10	<1.0	210	<6	4	30	--
DEC											
20...	<0.5	8	67	<10	<10	<1.0	200	<6	34	1.9	0.3
JAN 1989											
09...	<0.5	<4	<1	<10	<10	<1.0	140	<6	38	1.8	4.5
14...	<0.5	8	19	<10	<10	<1.0	170	<6	7	2.2	1.7
18...	<0.5	<4	15	<10	<10	<1.0	110	<6	6	2.4	>2.7
FEB											
14...	<0.5	5	13	<10	10	<1.0	120	<6	5	2.6	2.2
16...	0.6	5	16	<10	<10	<1.0	71	<6	<3	--	--
23...	<0.5	<4	21	<10	<10	<1.0	92	<6	4	2.5	>2.5
MAR											
21...	<0.5	5	23	<10	<10	<1.0	130	<6	<3	2.6	1.8
APR											
18...	0.5	5	32	<10	<10	1.0	130	<6	10	2.2	0.6
MAY											
11...	0.6	6	5	<10	<10	1.0	120	<6	11	3.7	>2.5
16...	<0.5	4	6	<10	<10	2.0	130	<6	<3	2.5	0.3
25...	<0.5	9	<1	<10	<10	<1.0	210	<6	9	2.4	>2.5
JUN											
20...	<0.5	<4	3	<10	<10	1.0	95	<6	<3	3.0	>2.4
JUL											
11...	<0.5	<4	6	<10	<10	<1.0	170	<6	19	2.8	0.7
AUG											
22...	<0.5	5	9	<10	<10	<1.0	260	<6	4	2.7	0.6

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988											
18...	0930	0.10	<1	<1	0.7	<0.4	5.7	<0.4	4.4	<0.4	<0.01
NOV											
21...	1200	0.10	<1	<1	1.8	7.5	4.2	7.5	3.2	6.8	<0.01
JAN 1989											
09...	1300	0.20	<1	<1	1.4	9.0	2.6	11	2.0	9.7	<0.01
14...	0845	0.10	<1	<1	<0.4	5.9	2.8	4.4	2.1	3.9	<0.01
18...	1300	<0.10	<1	<1	<0.4	6.1	2.3	6.7	1.8	5.9	<0.01
FEB											
14...	1500	0.10	<1	<1	0.6	13	2.4	11	1.9	9.7	<0.01
16...	1745	0.10	<1	<1	<0.4	28	1.9	16	1.6	15	<0.01
APR											
18...	1250	0.10	<1	<1	0.5	1.4	2.6	1.5	2.0	1.3	<0.01
MAY											
11...	1935	0.10	<1	<1	0.9	18	2.7	15	2.2	13	<0.01
25...	1000	0.10	<1	<1	1.1	8.3	4.1	8.0	3.2	7.1	<0.01
JUL											
11...	1315	0.10	<1	<1	<0.4	4.4	2.9	3.9	2.2	3.6	<0.01

DATE	TIME	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
NOV 1988								
21...	1200	11000	200	<10	60	1	13	30
JAN 1989								
09...	1300	4500	100	<10	20	<1	7	20
14...	0845	1700	<100	<10	30	<1	4	<10
FEB								
14...	1500	4400	100	<10	40	<1	7	10
16...	1745	6800	100	<10	30	<1	10	100
MAY								
11...	1935	6500	<100	<10	80	<1	8	20
25...	1000	2600	<100	<10	70	<1	4	10

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 1988							
21...	18000	7	1300	6	28	<1	80
JAN 1989							
09...	6500	5	490	2	7	<1	30
14...	3200	<5	220	3	5	<1	20
FEB							
14...	7400	<5	550	3	<1	<1	--
16...	12000	44	690	4	14	<1	70
MAY							
11...	11000	12	470	4	14	<1	40
25...	5500	8	320	4	8	<1	30

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
17...	0800	9.5	2.0	547	7.90	580	31	<2.5	<2.5	<2.5	<2.5	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
17...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
17...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	1200

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE . BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
17...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<1500	300	<250	<500	<250	<250	<250	<500	<250	<250

03287500 KENTUCKY RIVER AT LOCK 4, AT FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORO-NAPH-THALENE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHAL-ATE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	3,3'-DI-CHLORO-BENZI-DINE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	BENZI-DINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<1500	<1500	<250	<1500	380	<250	<2500	<250	<250

KENTUCKY RIVER BASIN

03288000 NORTH ELKHORN CREEK NEAR GEORGETOWN, KY

LOCATION.--Lat 38°12'20", long 84°30'49", Scott County, Hydrologic Unit 05100205, on left bank at upstream side of bridge on Crumbull Pike, 1.7 mi downstream from Miller Run, 2.5 mi east of Georgetown, 2.7 mi upstream from Lanes Run at mile 58.3.

DRAINAGE AREA.--119 mi^2, of which about 8 mi^2 does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1949 to September 1983; October 1988 to current year. Monthly discharge only October 1949 to March 1950, published in WSP 1305.

GAGE.--Water-stage recorder and concrete control with crest-stage gage. Datum of gage is 786.49 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 18, 1952, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1-11, 28 to Nov. 3, Nov. 21-29, and Jan. 26-31. Water-discharge records good except those for estimated discharge, which are fair.

AVERAGE DISCHARGE.--35 years (Water years 1950-83, 1989), 167 ft^3/s, 19.06 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,730 ft^3/s, Dec. 9, 1978; gage height, 20.22 ft, no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1948 reached a stage of about 22 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	2100	2,910	10.69	Feb. 16	0330	*7,690	*19.35
Dec. 25	0030	2,970	10.81	Feb. 21	1700	2,980	10.64
Jan. 15	0830	3,190	11.27	Mar. 6	0330	4,410	13.64

Minimum daily discharge, 2.5 ft^3/s, Oct. 15-18, Nov. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	2.7	66	253	76	218	802	46	80	33	12	32
2	6.3	2.6	56	231	71	197	514	43	67	28	12	32
3	5.8	2.5	49	207	1100	187	420	42	57	26	11	32
4	5.3	2.5	43	185	1340	172	677	37	89	25	9.4	23
5	4.9	4.7	38	163	634	1070	914	50	219	23	7.9	18
6	4.5	4.6	34	209	423	3670	589	77	213	20	9.6	14
7	4.1	8.0	30	261	312	1150	563	60	135	27	99	12
8	3.8	6.6	27	975	242	625	512	47	92	24	41	10
9	3.6	4.6	24	738	191	447	603	202	79	17	20	9.4
10	3.3	4.8	21	434	165	349	472	470	76	14	14	11
11	2.8	7.7	19	318	150	287	372	268	59	11	10	9.0
12	2.6	10	17	721	130	235	295	190	48	9.2	7.0	7.6
13	3.0	9.8	15	656	501	206	235	152	122	12	5.7	6.4
14	3.7	7.2	15	999	5390	217	196	122	254	9.2	4.9	7.4
15	2.5	6.2	14	2410	6190	184	184	153	556	7.5	4.3	13
16	2.5	5.5	13	881	6210	160	173	180	924	6.7	5.3	18
17	2.5	4.4	12	519	1780	142	139	141	441	6.5	25	60
18	2.5	3.7	11	376	846	147	125	110	284	6.1	335	51
19	2.8	65	11	291	590	206	158	93	208	12	131	30
20	2.6	1600	10	232	467	235	133	176	431	139	65	19
21	3.7	1310	22	191	2280	1620	104	226	279	97	69	14
22	5.4	700	131	167	1210	914	89	152	191	84	78	12
23	4.9	400	330	148	669	545	80	1280	139	49	58	56
24	6.5	225	1500	128	483	395	76	677	102	43	62	237
25	6.2	130	1560	113	393	311	72	384	81	32	302	120
26	6.6	94	544	104	341	250	66	300	66	23	378	76
27	6.8	98	362	97	290	207	82	306	56	17	180	53
28	5.4	128	398	91	252	179	64	217	55	13	110	39
29	4.4	88	472	88	---	182	56	171	49	11	74	33
30	3.5	75	354	82	---	606	54	134	40	12	56	29
31	2.8	---	280	78	---	836	---	102	---	14	43	---
TOTAL	132.2	5011.1	6478	12346	32726	16149	8819	6608	5492	851.2	2239.1	1083.8
MEAN	4.26	167	209	398	1169	521	294	213	183	27.5	72.2	36.1
MAX	6.9	1600	1560	2410	6210	3670	914	1280	924	139	378	237
MIN	2.5	2.5	10	78	71	142	54	37	40	6.1	4.3	6.4
CFSM	.04	1.50	1.88	3.59	10.5	4.69	2.65	1.92	1.65	.25	.65	.33
IN.	.04	1.68	2.17	4.14	10.97	5.41	2.96	2.21	1.84	.29	.75	.36

WTR YR 1989 TOTAL 97935.4 MEAN 268 MAX 6210 MIN 2.5 CFSM 2.42 IN. 32.82

03288000 NORTH ELKHORN CREEK AT GEORGETOWN, KY

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOL (C6H5OH) TOTAL (UG/L)	DIBROMOMETHANE WATER WHOLE RECOVER (UG/L)	DICHLOROBROMOMETHANE TOTAL (UG/L)	CARBONTETRACHLORIDE TOTAL (UG/L)	1,2-DICHLOROETHANE TOTAL (UG/L)
NOV 1988 05...	0915	1.5	--	11.0	12.0	5.5	<5.0	<0.20	<0.20	<0.20	<0.20
FEB 1989 13...	1330	75	6.65	4.5	--	1.9	<5.0	<0.20	<0.20	<0.20	<0.20
JUN 06...	1215	212	8.02	20.5	--	6.9	<5.0	<0.20	<0.20	<0.20	<0.20

DATE	BROMOFORM TOTAL (UG/L)	CHLORODIBROMOMETHANE TOTAL (UG/L)	CHLOROFORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLOROBENZENE TOTAL (UG/L)	CHLOROETHANE TOTAL (UG/L)	ETHYLBENZENE TOTAL (UG/L)	METHYLBROMIDE TOTAL (UG/L)	METHYLCHLORIDE TOTAL (UG/L)	METHYLENE CHLORIDE TOTAL (UG/L)
NOV 1988 05...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FEB 1989 13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN 06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	PARACHLOROMETA CRESOL TOTAL (UG/L)	TETRACHLOROETHYLENE TOTAL (UG/L)	TRICHLOROFLUOROMETHANE TOTAL (UG/L)	1,1-DICHLOROETHANE TOTAL (UG/L)	1,1-DICHLOROETHYLENE TOTAL (UG/L)	1,1,1-TRICHLOROETHANE TOTAL (UG/L)	1,1,2-TRICHLOROETHANE TOTAL (UG/L)	1,1,2,2 TETRACHLOROETHANE TOTAL (UG/L)	1,2-DICHLOROBENZENE TOTAL (UG/L)	1,2-DICHLOROPROPANE TOTAL (UG/L)	1,3-DICHLOROBENZENE TOTAL (UG/L)
NOV 1988 05...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FEB 1989 13...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN 06...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,4-DICHLOROBENZENE TOTAL (UG/L)	2-CHLOROPHENOL TOTAL (UG/L)	2-NITROPHENOL TOTAL (UG/L)	2,4-DICHLOROPHENOL TOTAL (UG/L)	2,4-DIMETHYLPHENOL TOTAL (UG/L)	2,4,-DINITROPHENOL TOTAL (UG/L)	2,4,6-TRICHLOROPHENOL TOTAL (UG/L)	4-NITROPHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	DICHLORODIFLUOROMETHANE TOTAL (UG/L)	TRANS-1,3-DICHLOROPROPENE TOTAL (UG/L)
NOV 1988 05...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20
FEB 1989 13...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20
JUN 06...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20

03288000 NORTH ELKHORN CREEK AT GEORGETOWN, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	STYRENE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	1,3-DI CHLORO-PRO-PANE, WAT. WH TOTAL (UG/L)
NOV 1988 05...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--
FEB 1989 13...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--
JUN 06...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.20

DATE	ORTHO-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	PARA-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	1,1,1,2 TETRA-CHLORO-ETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	1,2-DI-CHLORO-ETHENE WATER WHOLE RECOVER (UG/L)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
NOV 1988 05...	--	--	--	<0.2	--	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
FEB 1989 13...	--	--	--	<0.2	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN 06...	<0.20	<0.20	<0.20	<0.2	<0	0.02	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	ALA-CHLOR TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
NOV 1988 05...	<0.01	0.01	<0.01	--	<0.01	<0.10	<0.10	<0.10	<0.01	<0.01	<0.01
FEB 1989 13...	<0.01	<0.01	<0.01	<0.50	<0.01	<0.10	<0.10	<0.10	<0.01	<0.01	<0.01
JUN 06...	<0.0[illegible]	0.17	<0.01	--	<0.01	0.20	<0.10	16	<0.01	<0.01	<0.01

DATE	AME-TRYNE TOTAL	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	PRO-PAZINE TOTAL (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)	METHO-MYL TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)
NOV 1988 05...	<0.10	<0.1	<0.1	<0.10	<0.10	--	--	<0.1	<0.10	0.2	<0.1
FEB 1989 13...	<0.10	<0.1	<0.1	<0.10	<0.10	<0.5	<0.5	<0.1	<0.10	<0.1	<0.1
JUN 06...	<0.10	<0.1	<0.1	0.10	<0.10	--	--	<0.1	4.5	<0.1	<0.1

03289000 SOUTH ELKHORN CREEK AT FORT SPRING, KY

LOCATION.--Lat 38°02'35", long 84°37'35", Fayette County, Hydrologic Unit 05100205, on downstream side of bridge on Fort Spring Road At U.S. Highway 60 at Fort Spring, 1.7 mi upstream from Shannon Run, 6.5 mi west of Lexington, and at mile 42.6.

DRAINAGE AREA.--24.0 mi^2, of which about 3 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--March 1950 to current year.

REVISED RECORDS.--WSP 1275: 1951-52. WSP 1505: Drainage area. WSP 1625: 1951-52(P).

GAGE.--Water-stage recorder. Datum of gage is 834.25 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 12, 1952, and Feb. 18 to Nov. 16, 1965, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--39 years, 32.6 ft^3/s, 18.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,280 ft^3/s, Feb. 15, 1989, gage height, 9.50 ft; maximum gage height, 12.13 ft, Sept. 21, 1979 (backwater from bridge construction), discharge not determined; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0930	1,360	7.86	Feb. 15	0930	*2,280	*9.50
Dec. 24	1330	1,140	7.39	Feb. 21	0530	748	6.34
Jan. 8	0600	657	6.05	Mar. 5	1300	1,040	7.15
Jan. 14	2030	914	6.82	May 20	0630	533	5.62
Feb. 13	2030	1,460	8.11	May 23	0300	511	5.54

Minimum daily discharge, 2.4 ft^3/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	4.5	24	58	14	23	139	8.4	27	9.1	34	7.4
2	10	4.4	20	48	14	20	104	8.5	23	9.0	37	8.7
3	6.8	4.6	19	42	296	15	95	7.0	24	9.0	13	4.5
4	6.3	5.7	16	34	200	12	182	6.9	48	7.9	8.9	3.9
5	5.4	15	15	31	121	495	191	26	47	8.6	11	3.6
6	4.8	8.0	14	66	82	521	142	14	28	6.8	92	3.2
7	4.7	7.2	13	60	60	237	112	10	21	6.2	39	3.0
8	4.6	6.0	12	288	46	156	115	8.7	16	5.5	20	2.6
9	4.7	4.8	11	142	35	114	108	85	30	10	13	2.4
10	4.7	54	10	94	30	88	91	82	18	5.5	9.7	3.4
11	5.1	22	9.8	78	26	70	77	46	13	4.8	7.7	3.2
12	5.2	11	9.3	141	22	55	63	32	14	4.4	6.6	3.0
13	5.7	8.6	9.6	113	418	60	51	24	78	4.2	5.9	2.9
14	6.3	6.6	9.6	320	1040	54	42	19	46	3.9	5.2	4.8
15	7.2	5.6	8.9	297	1310	49	44	33	131	3.3	4.6	14
16	7.5	5.4	8.6	151	778	36	34	41	119	3.3	5.8	41
17	9.2	4.9	8.3	104	352	31	27	24	80	3.3	37	26
18	7.8	4.2	8.1	79	212	50	23	19	57	2.8	48	9.7
19	8.2	305	8.3	60	140	44	30	16	67	128	17	6.7
20	8.1	672	7.9	48	116	83	21	173	153	102	14	4.9
21	13	194	56	38	419	297	17	86	82	37	19	4.3
22	12	105	47	32	200	168	15	74	56	20	10	51
23	13	71	171	26	128	116	13	253	43	14	24	165
24	13	51	477	23	92	89	13	138	33	10	41	80
25	6.5	40	212	20	72	70	12	98	25	8.4	17	44
26	5.4	31	118	23	58	54	11	112	20	8.2	11	26
27	4.9	67	88	21	43	44	19	88	16	6.4	8.6	17
28	5.6	42	123	18	31	36	12	65	21	5.9	7.7	12
29	5.9	33	102	16	---	51	9.9	52	14	5.3	5.7	12
30	5.2	29	81	16	---	121	8.4	41	11	14	4.8	9.3
31	4.8	---	61	15	---	172	---	32	---	22	4.1	---
TOTAL	218.2	1822.5	1778.4	2502	6355	3431	1821.3	1722.5	1361	488.8	582.3	579.5
MEAN	7.04	60.7	57.4	80.7	227	111	60.7	55.6	45.4	15.8	18.8	19.3
MAX	13	672	477	320	1310	521	191	253	153	128	92	165
MIN	4.6	4.2	7.9	15	14	12	8.4	6.9	11	2.8	4.1	2.4
CFSM	.29	2.53	2.39	3.36	9.46	4.61	2.53	2.32	1.89	.66	.78	.80
IN.	.34	2.82	2.76	3.88	9.85	5.32	2.82	2.67	2.11	.76	.90	.90

CAL YR 1988 TOTAL 10412.70 MEAN 28.4 MAX 672 MIN .30 CFSM 1.19 IN. 16.14
WTR YR 1989 TOTAL 22662.5 MEAN 62.1 MAX 1310 MIN 2.4 CFSM 2.59 IN. 35.13

03289300 SOUTH ELKHORN CREEK NEAR MIDWAY, KY

LOCATION.--Lat 38°08'27", long 84°38'43", Scott County, Hydrologic Unit 05100205, on right bank 5 ft upstream from bridge on U.S. Route 62/421, 2.2 mi southeast of Midway, 6.5 mi downstream from Town Branch, and at mile 27.6.

DRAINAGE AREA.--105 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 30 to Feb. 21, Mar. 23 to Apr. 26, May 29 to June 4, 19-29, July 7-12, Aug. 14 to Sept. 1, 12-30. Water-discharge records poor. Water is diverted from the Kentucky River, for use by the city of Lexington, and is discharged into Town Branch at a site 17 mi above gage. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--7 years, 152 ft^3/s, 19.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,270 ft^3/s, Feb. 15, 1989, gage height, 21.28 ft from floodmark; minimum daily discharge, 15 ft^3/s, Oct. 2, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1600	2,410	13.42	Feb. 21	Unknown	Unknown	Unknown
Dec. 24	2000	2,070	12.46	Mar. 6	0800	2,520	13.71
Jan. 8	1200	1,120	9.49	Mar. 21	0900	1,280	10.01
Jan. 15	0400	2,090	12.52	May 23	0800	1,140	9.54
Feb. 15	Unknown	7,270	(a)*21.28				

(a) from floodmark

Minimum daily discharge, 20 ft^3/s, Aug. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	33	106	239	80	181	600	65	180	66	63	50
2	57	33	93	190	400	163	500	70	170	56	93	71
3	45	33	82	160	880	147	470	63	160	68	58	44
4	39	37	72	141	620	129	610	58	190	52	46	34
5	37	87	63	124	470	897	780	123	222	79	39	33
6	34	85	61	197	360	2070	650	97	195	89	33	36
7	31	62	60	202	290	949	580	74	130	76	57	38
8	29	56	52	751	230	624	510	65	113	60	68	40
9	27	48	47	587	190	477	440	204	128	96	54	71
10	25	114	44	408	155	367	380	340	107	80	46	210
11	28	166	40	311	130	292	340	197	79	62	41	80
12	26	91	38	577	230	233	290	150	80	52	37	66
13	25	74	39	550	700	232	260	122	273	47	33	52
14	26	62	37	646	2300	221	230	107	295	44	27	70
15	24	54	38	1530	7000	183	190	134	358	38	24	94
16	23	49	36	783	5000	155	150	162	419	33	20	110
17	30	50	32	531	2700	138	110	124	301	31	47	70
18	35	43	31	400	1400	170	120	105	217	31	120	50
19	34	451	32	312	600	174	140	92	500	234	100	32
20	30	1690	32	239	850	184	110	387	440	323	75	40
21	47	858	133	192	1100	1010	100	245	350	153	70	90
22	68	428	159	161	893	708	90	189	270	100	58	200
23	53	285	394	146	616	510	83	777	210	77	80	450
24	70	204	1100	132	462	410	76	506	170	108	130	310
25	54	154	1040	134	372	330	70	362	130	66	100	200
26	44	127	532	119	315	270	85	459	100	56	80	140
27	38	228	370	116	262	220	95	390	82	49	68	110
28	37	174	433	91	223	230	87	268	88	44	60	86
29	39	141	442	89	---	330	80	220	100	40	52	71
30	35	121	335	86	---	450	69	210	85	35	44	58
31	32	---	256	83	---	690	---	200	---	59	46	---
TOTAL	1166	6038	6229	10227	28828	13144	8295	6565	6142	2404	1869	3008
MEAN	37.6	201	201	330	1030	424	276	212	205	77.5	60.3	100
MAX	70	1690	1100	1530	7000	2070	780	777	500	323	130	450
MIN	23	33	31	83	80	129	69	58	79	31	20	32
CFSM	.36	1.92	1.91	3.14	9.81	4.04	2.63	2.02	1.95	.74	.57	.95
IN.	.41	2.14	2.21	3.62	10.21	4.66	2.94	2.33	2.18	.85	.66	1.07

CAL YR 1988 TOTAL 48549 MEAN 133 MAX 1690 MIN 20 CFSM 1.26 IN. 17.20
WTR YR 1989 TOTAL 93915 MEAN 257 MAX 7000 MIN 20 CFSM 2.45 IN. 33.27

03289300 SOUTH ELKHORN CREEK NEAR MIDWAY, KY

WATER QUALITY RECORDS

PERIOD OF RECORD.--June 1981-1983, May 1988 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TEMPER-ATURE AIR (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOL (C6H-5OH) TOTAL (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)
NOV 1988											
05...	0735	129	--	12.0	11.0	9.5	<5.0	<0.20	<0.20	<0.20	<0.20
FEB 1989											
13...	1115	701	7.70	6.5	--	2.7	<5.0	<0.20	0.30	<0.20	<0.20
JUN											
06...	1030	211	8.12	20.0	--	5.5	--	<0.20	0.20	<0.20	<0.20

DATE	BROMO-FORM TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)
NOV 1988											
05...	<0.20	<0.20	0.30	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FEB 1989											
13...	<0.20	<0.20	0.80	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
06...	<0.20	<0.20	0.60	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	PARA-CHLORO-META CRESOL TOTAL (UG/L)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)
NOV 1988											
05...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
FEB 1989											
13...	<30.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
06...	--	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO-ORTHO-CRESOL TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
NOV 1988											
05...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20
FEB 1989											
13...	<0.20	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20
JUN											
06...	<0.20	--	--	--	--	--	--	--	--	<0.20	<0.20

03289300 SOUTH ELKHORN CREEK NEAR MIDWAY, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	PENTA-CHLORO-PHENOL TOTAL (UG/L)	STYRENE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	1,3-DI CHLORO-PRO-PANE, WAT. WH TOTAL (UG/L)
NOV 1988 05...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--
FEB 1989 13...	<0.20	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--
JUN 06...	<0.20	--	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.20

DATE	ORTHO-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	PARA-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	1,1,1,2 TETRA-CHLORO-ETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	1,2-DI-CHLORO-ETHENE WATER WHOLE RECOVER (UG/L)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)
NOV 1988 05...	--	--	--	<0.2	--	0.34	<0.01	<0.01	<0.01	<0.01	<0.01
FEB 1989 13...	--	--	--	<0.2	--	0.10	<0.01	<0.01	<0.01	<0.01	<0.01
JUN 06...	<0.20	<0.20	<0.20	<0.2	<0	0.07	<0.01	0.01	<0.01	<0.01	<0.01

DATE	TOTAL TRI-THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	ALA-CHLOR TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)
NOV 1988 05...	<0.01	0.01	<0.01	--	<0.01	<0.10	<0.10	<0.10	0.02	<0.01	<0.01
FEB 1989 13...	<0.01	<0.01	<0.01	<0.50	<0.01	<0.10	<0.10	<0.10	<0.01	<0.01	<0.01
JUN 06...	<0.01	0.47	<0.01	--	<0.01	0.30	<0.10	0.80	<0.01	<0.01	<0.01

DATE	AME-TRYNE TOTAL	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	PRO-PAZINE TOTAL (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)	METHO-MYL TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)
NOV 1988 05...	<0.10	<0.1	<0.1	<0.10	<0.10	--	--	<0.1	<0.10	0.2	<0.1
FEB 1989 13...	<0.10	<0.1	<0.1	<0.10	<0.10	<0.5	<0.5	<0.1	<0.10	<0.1	<0.1
JUN 06...	<0.10	<0.1	<0.1	<0.10	<0.10	--	--	<0.1	0.20	0.1	<0.1

03289500 ELKHORN CREEK NEAR FRANKFORT, KY

LOCATION.--Lat 38°16'07", long 84°48'53", Franklin County, Hydrologic Unit 05100205, on right bank, 50 ft downstream from bridge on State Highway 1900, 4.2 mi northeast of city limits of Frankfort, 7.4 mi downstream from confluence of North and South Elkhorn Creeks, and at mile 10.4.

DRAINAGE AREA.--473 mi^2 of which about 70 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--May 1915 to December 1920 (gage heights only, October 1918 to December 1920), December 1939 to September 1983, October 1987 to current year. Published as "at Forks of Elkhorn" 1915-20.

REVISED RECORDS.--WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is approximately 540.20 ft above National Geodetic Vertical Datum of 1929. May 1, 1915, to Dec. 31, 1920, nonrecording gage at site 6.6 mi (10.6 km) upstream at different datum. Dec. 28, 1939, to Aug. 14, 1940, nonrecording gage, Aug. 15, 1940, to July 21, 1970, water-stage recorder, July 21 to Aug. 31, 1970, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 20-23. Water-discharge records good. City of Lexington diverts water from Hickman Creek in Kentucky River basin for municipal water supply; return flow of which enters tributary above station.

AVERAGE DISCHARGE.--48 years (Water years 1916-18, 1941-83, 1988-89), 615 ft^3/s, 17.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft^3/s, Feb. 16, 1989, gage height, 15.26 ft; no flow Jan. 7-13, 1940.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1932, reached a stage of about 17.5 ft, from information by local resident. Flood of January 1937 was about 0.3 ft lower.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 25	0400	7,010	9.24	Feb. 21	1900	7,390	9.32
Jan. 15	1100	8,300	9.73	Mar. 6	1500	10,700	10.67
Feb. 16	0600	*28,700	*15.26				

Minimum daily discharge, 27 ft^3/s, Oct. 15, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	41	270	1090	273	946	3210	268	378	195	80	140
2	59	40	240	986	258	787	2290	254	325	178	80	123
3	57	39	215	799	2620	690	1890	249	294	164	98	132
4	54	41	191	673	4860	609	2220	240	333	154	80	113
5	45	48	169	568	2940	1530	2960	258	505	139	64	96
6	42	90	153	672	2030	9250	2480	352	894	145	74	86
7	39	117	145	1000	1570	5880	2180	329	578	140	154	78
8	37	121	135	1920	1270	3020	2070	288	400	118	130	73
9	36	103	124	3170	1010	2150	2290	416	352	114	137	67
10	33	118	113	2020	807	1700	2040	1520	335	106	103	87
11	31	183	106	1520	710	1410	1720	1270	286	93	83	79
12	29	221	101	2830	625	1140	1460	801	246	84	68	72
13	30	163	98	3040	1080	927	1230	575	258	80	59	69
14	29	148	95	3120	13500	906	1000	454	607	109	51	68
15	27	123	90	7410	20500	775	863	423	1260	90	45	86
16	28	105	86	4260	25000	627	804	517	2530	74	42	121
17	27	94	83	2520	12800	530	666	501	1890	61	108	193
18	29	90	76	1840	4700	499	584	394	1300	56	878	204
19	33	161	79	1470	3180	595	618	340	919	64	683	170
20	34	3000	82	1170	2380	666	644	344	1310	327	303	139
21	38	2100	100	922	5760	3470	525	788	1350	338	235	114
22	40	1300	227	732	5310	3720	455	590	819	254	343	119
23	65	900	423	616	3020	2320	387	1540	555	185	259	818
24	64	616	3290	532	2200	1800	368	2720	436	153	224	1300
25	62	425	5730	467	1790	1440	364	1620	354	143	273	871
26	67	324	2500	424	1550	1150	351	1260	294	119	924	519
27	64	330	1650	425	1370	920	335	1330	257	100	555	357
28	56	460	1720	384	1140	751	336	985	276	84	311	269
29	47	380	2130	329	---	660	327	705	278	72	227	219
30	42	308	1660	301	---	1900	294	543	229	65	186	199
31	44	---	1330	287	---	3110	---	451	---	62	155	---
TOTAL	1350	12189	23411	47497	124253	55878	36971	22325	19848	4066	7012	6981
MEAN	43.5	406	755	1532	4438	1803	1232	720	662	131	226	233
MAX	67	3000	5730	7410	25000	9250	3210	2720	2530	338	924	1300
MIN	27	39	76	287	258	499	294	240	229	56	42	67
CFSM	.11	1.01	1.88	3.81	11.0	4.48	3.06	1.78	1.64	.33	.56	.58
IN.	.12	1.13	2.16	4.39	11.49	5.17	3.42	2.08	1.83	.38	.65	.65

CAL YR 1988 TOTAL 156935 MEAN 429 MAX 8520 MIN 13 CFSM 1.07 IN. 14.51
WTR YR 1989 TOTAL 361781 MEAN 991 MAX 25000 MIN 27 CFSM 2.46 IN. 33.44

03289500 ELKHORN CREEK NEAR FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1987 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 1988												
18...	1430	31	799	8.12	18.5	16.0	9.8	102	86	180	250	110
NOV												
15...	0830	128	575	8.44	6.5	8.0	10.3	89	43	63	240	57
20...	1540	E1500	446	7.47	10.5	11.0	9.6	90	--	--	170	56
DEC												
20...	0845	82	580	8.28	13.5	3.5	11.0	85	8	45	250	95
28...	1315	1800	382	8.60	-0.5	7.5	10.3	87	--	--	200	54
JAN 1989												
12...	1315	3510	315	8.30	13.0	8.5	11.8	103	--	--	160	35
18...	0900	1930	388	8.20	5.5	6.0	11.1	91	K170	500	190	43
FEB												
03...	1245	3370	319	7.90	0.0	5.5	11.1	90	--	--	150	44
14...	1100	14900	244	8.02	7.5	6.0	12.0	98	--	--	120	32
23...	0900	2820	328	8.10	-3.5	6.0	11.0	89	--	--	160	46
MAR												
21...	0915	3280	291	8.26	5.0	8.5	9.2	80	>6000	>10000	150	43
APR												
18...	0845	607	386	7.76	18.0	15.5	8.1	82	K78	K54	190	52
MAY												
16...	0900	501	432	7.71	15.0	17.0	9.4	99	170	>6000	200	48
JUN												
15...	1300	1360	375	8.25	22.0	21.5	8.0	93	--	--	170	52
20...	0900	1210	392	8.16	23.5	21.5	8.5	98	8600	--	190	41
JUL												
11...	0830	93	491	7.65	29.0	27.5	5.9	77	K60	>20000	210	54
AUG												
22...	0900	360	376	8.15	25.0	22.5	7.4	86	600	1000	170	36

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 1988												
18...	81	12	65	35	2	8.2	141	172	--	138	93	87
NOV												
15...	79	9.1	32	22	0.9	5.4	--	--	--	178	67	41
20...	58	6.4	20	20	0.7	2.9	117	142	--	116	47	28
DEC												
20...	87	8.8	29	20	0.8	4.1	158	181	6	159	68	35
28...	71	5.5	7.1	7	0.2	2.1	139	165	2	146	36	11
JAN 1989												
12...	57	4.5	5.3	7	0.2	2.3	121	136	6	126	31	9.1
18...	69	4.9	6.7	7	0.2	1.8	150	183	--	150	35	11
FEB												
03...	54	4.5	5.4	7	0.2	2.2	111	135	--	110	43	11
14...	41	3.4	6.0	10	0.3	2.9	87	106	--	85	26	9.5
23...	56	4.0	5.0	6	0.2	1.7	110	134	--	111	30	8.5
MAR												
21...	52	4.4	5.7	8	0.2	2.1	92	112	--	91	31	8.5
APR												
18...	68	5.3	8.9	9	0.3	1.6	136	166	--	136	34	13
MAY												
16...	70	6.1	9.9	10	0.3	2.1	152	186	--	153	37	12
JUN												
15...	61	5.3	10	11	0.3	2.8	--	--	--	141	32	12
20...	68	5.3	6.0	6	0.2	2.8	148	180	--	147	28	8.5
JUL												
11...	74	6.9	19	16	0.6	3.7	162	198	--	157	45	22
AUG												
22...	59	5.5	12	13	0.4	4.6	138	168	--	137	35	13

03289500 ELKHORN CREEK NEAR FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	BROMIDE DIS- SOLVED (MG/L AS BR)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHOROUS TOTAL (MG/L AS P)
OCT 1988												
18...	0.12	2.2	483	476	0.66	40.6	8.49	0.01	0.02	8.5	1.3	1.70
NOV												
15...	0.04	2.7	348	357	0.47	120	2.39	0.01	0.02	2.4	1.5	0.92
20...	0.020	3.8	244	248	0.33	0.0	2.18	0.02	0.09	2.2	2.8	5.70
DEC												
20...	0.036	2.2	372	365	0.51	82.8	7.36	0.04	0.02	7.4	0.4	1.10
28...	0.018	5.8	256	250	0.35	1240	5.19	0.01	0.04	5.2	0.5	0.35
JAN 1989												
12...	0.032	5.6	195	209	0.27	1850	3.99	0.01	0.05	4.0	1.2	0.84
18...	0.010	6.1	230	250	0.31	1200	5.59	0.01	0.05	5.6	0.7	0.52
FEB												
03...	0.17	4.6	411	202	0.56	3740	--	<0.01	0.10	2.3	1.6	1.30
14...	0.011	4.2	155	158	0.21	6240	2.68	0.02	0.49	2.7	3.4	0.52
23...	0.015	5.5	196	198	0.27	1490	--	<0.01	0.03	4.5	1.0	0.58
MAR												
21...	<0.010	4.1	184	181	0.25	1630	2.08	0.02	0.02	2.1	1.1	0.79
APR												
18...	<0.010	0.41	230	231	0.31	377	3.28	0.02	0.02	3.3	0.7	0.34
MAY												
16...	0.010	3.2	230	245	0.31	311	2.78	0.02	0.03	2.8	0.7	0.42
JUN												
15...	0.050	3.5	263	211	0.36	966	2.09	0.01	0.04	2.1	0.7	0.50
20...	0.010	5.7	238	229	0.32	778	2.98	0.02	0.11	3.0	0.8	0.41
JUL												
11...	0.020	3.2	298	289	0.41	74.5	3.58	0.02	0.06	3.6	0.7	0.72
AUG												
22...	0.030	4.9	245	225	0.33	238	--	<0.01	0.02	1.9	0.8	0.68

DATE	PHOS- PHOROUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHOROUS ORGANIC TOTAL (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 1988												
18...	1.40	1.7	<10	2	23	<0.5	140	0.4	1.1	<3	3.4	10
NOV												
15...	0.85	0.92	<10	1	23	<0.5	80	0.2	0.8	<3	<0.5	13
20...	0.37	5.7	140	1	21	<0.5	40	0.5	<0.5	<3	1.4	120
DEC												
20...	0.95	1.1	<10	1	27	<0.5	50	0.2	0.7	<3	1.9	10
28...	0.26	0.35	20	<1	19	<0.5	20	0.2	0.9	<3	0.9	20
JAN 1989												
12...	0.27	0.84	20	<1	20	<0.5	10	0.3	0.6	<3	2.3	71
18...	0.28	0.52	20	<1	28	<0.5	20	<1	<5	<3	<10	14
FEB												
03...	0.27	1.3	20	<1	16	<0.5	20	<0.1	0.8	<3	1.7	190
14...	0.32	0.52	220	2	13	<0.5	20	0.4	2.2	<3	2.4	79
23...	0.26	0.58	40	<1	16	<0.5	10	0.3	<0.5	<3	1.0	41
MAR												
21...	0.20	0.79	110	<1	15	<0.5	<10	0.1	<0.5	<3	1.1	140
APR												
18...	0.28	0.34	20	<1	18	<0.5	20	<0.2	0.6	<3	1.8	7
MAY												
16...	0.33	0.42	10	<1	21	<0.5	40	0.2	<0.5	<3	1.3	10
JUN												
15...	0.36	0.50	30	<1	22	<0.5	30	0.3	0.6	<3	1.5	20
20...	0.31	0.41	30	<1	22	<0.5	20	0.4	<0.5	<3	0.7	11
JUL												
11...	0.65	0.72	20	1	28	<0.5	50	0.6	<0.5	<3	1.7	10
AUG												
22...	0.50	0.68	10	<1	24	<0.5	40	0.4	<0.5	<3	2.0	11

03289500 ELKHORN CREEK NEAR FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
OCT 1988											
18...	0.8	10	7	30	10	<1.0	280	<6	26	6.4	0.1
NOV											
15...	<0.5	8	4	10	<10	<1.0	220	<6	22	3.9	0.1
20...	<0.5	7	38	<10	<10	<1.0	140	<6	7	3.5	>5.2
DEC											
20...	<0.5	7	9	<10	<10	<1.0	170	<6	54	3.0	0.2
28...	<0.5	7	7	<10	<10	<1.0	110	<6	4	1.9	1.1
JAN 1989											
12...	<0.5	7	8	<10	<10	<1.0	87	<6	7	3.7	>2.7
18...	<10	7	7	<10	<10	<1.0	110	<6	<3	1.8	0.8
FEB											
03...	<0.5	<4	18	<10	<10	<1.0	90	<6	39	3.9	>5.0
14...	0.9	6	26	<10	<10	<1.0	68	<6	7	3.9	>2.5
23...	<0.5	6	8	<10	<10	<1.0	86	<6	<3	2.1	1.4
MAR											
21...	<0.5	5	8	<10	<10	<1.0	86	<6	<3	3.9	>2.4
APR											
18...	<0.5	4	3	10	<10	<1.0	110	<6	4	2.2	0.4
MAY											
16...	<0.5	6	5	<10	<10	<1.0	130	<6	<3	2.8	0.2
JUN											
15...	<0.5	<4	4	<10	<10	<1.0	110	<6	5	3.3	2.2
20...	<0.5	5	2	<10	<10	<1.0	110	<6	7	3.1	2.3
JUL											
11...	<0.5	6	9	10	<10	1.0	150	<6	9	3.9	0.3
AUG											
22...	<0.5	4	5	<10	<10	<1.0	130	<6	4	4.2	0.7

DATE	TIME	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	ANTI- MONY, DIS- SOLVED (UG/L AS SB)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	CYANIDE DIS- SOLVED (MG/L AS CN)
OCT 1988											
18...	1430	2.0	<1	<1	<0.4	<0.4	12	<0.4	8.7	<0.4	<0.01
NOV											
20...	1540	0.40	<1	<1	<0.4	18	5.8	8.6	4.4	7.6	<0.01
DEC											
28...	1315	0.30	<1	<1	<0.4	2.0	2.0	3.1	1.7	2.9	<0.01
JAN 1989											
12...	1315	0.20	<1	<1	0.6	1.7	3.1	2.9	2.3	2.7	<0.01
18...	0900	0.20	<1	<1	0.6	1.1	2.2	1.0	1.6	1.0	<0.01
FEB											
03...	1245	0.20	<1	<1	<0.4	6.8	2.9	7.3	2.2	6.4	<0.01
14...	1100	0.20	<1	<1	<0.4	33	2.9	33	2.3	29	<0.01
APR											
18...	0845	0.30	<1	<1	<0.4	0.5	1.9	<0.4	1.4	<0.4	<0.01
JUN											
15...	1300	0.40	<1	<1	1.1	3.2	4.4	2.2	3.3	2.0	<0.01
JUL											
11...	0830	0.60	1	<1	<0.4	0.7	5.1	<0.4	3.9	<0.4	<0.01

03289500 ELKHORN CREEK NEAR FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1988								
20...	1540	5000	200	<10	60	1	9	20
DEC								
28...	1315	1200	100	<10	30	<1	2	<10
FEB								
03...	1245	4900	<100	10	20	1	7	10
14...	1100	10000	100	<10	50	2	17	20
JUN								
15...	1300	1400	100	<10	30	<1	2	<10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 1988							
20...	6800	15	720	11	14	1	50
DEC							
28...	1600	<5	140	2	4	<1	10
FEB							
03...	6700	<5	500	4	4	<1	40
14...	15000	29	1500	4	16	2	110
JUN							
15...	2100	6	200	5	5	<1	20

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
17...	0930	8.0	5.0	635	8.48	380	10	<2.5	<2.5	<2.5	<2.5	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
17...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
17...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

03289500 ELKHORN CREEK NEAR FRANKFORT, KY--Continued
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
17...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<1500	<250	18000	<500	<250	<250	<250	<500	<250	<250

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHOCRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYLHEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<1500	<1500	<250	<1500	820	<250	<2500	<250	<250

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY

LOCATION.--Lat 38°26'20", long 84°57'48", Henry County, Hydrologic Unit 05100205, on left bank at lock 2 at Lockport, 0.1 mi downstream from Sixmile Creek and at mile 31.0.

DRAINAGE AREA.--6,180 mi^2, of which about 196 mi^2 does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1305. Monthly discharge only for June to September 1930, published in WSP 1305; figures of daily discharge published in WSP 698 are unreliable.

REVISED RECORDS.--WSP 1385: 1926-29, 1932, 1934-37, 1945. WSP 1555: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 433.36 ft above National Geodetic Vertical Datum of 1929. Prior to August 29, 1975, nonrecording gage at same site and datum. Auxiliary nonrecording gage at lock 3, 11.0 mi upstream.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Carr Fork Lake beginning January 1976 (station 03277446), Buckhorn Lake beginning December 1960 (station 03280800), Herrington Lake beginning November 1925 (station 03286000), and by hydroelectric plant at lock 7.

COOPERATION.--Auxiliary gage readings furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--64 years, 8,210 ft^3/s, 18.04 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft^3/s, Jan. 26, 1937; maximum gage height, 56.85 ft Jan. 24, 1937 (backwater from Ohio River); minimum daily discharge, about 80 ft^3/s, Oct. 29, 1941, probably lower during 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 122,000 ft^3/s, Feb. 17; maximum gage height, 49.14 ft; minimum daily discharge, 295 ft^3/s, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	694	8310	13500	4320	15100	19300	5790	5960	10100	2310	1500
2	1430	625	6740	11400	4500	13500	16800	7070	4700	7530	2680	2760
3	1110	552	5180	10000	20800	12300	15000	9890	4120	4860	2700	3090
4	1050	577	4060	8290	42400	11200	37900	13800	4200	4490	2920	3130
5	860	647	3340	7000	43000	15800	39400	14100	4610	4580	2950	3140
6	760	870	3920	7340	33300	49200	36500	11500	4830	4770	4890	3100
7	681	1630	3860	8770	21900	60800	31300	10300	5610	4500	4790	2890
8	633	2300	3430	17600	15400	60200	24400	18200	5080	6410	3460	2430
9	578	2770	3030	22500	13700	60600	21000	26600	6830	9870	3210	2250
10	506	2790	2640	16900	11000	52200	18300	36700	19800	7420	3090	2230
11	454	3310	2540	16000	9570	25900	15900	36000	12500	6830	2510	1840
12	437	4100	2270	20900	8510	15300	13600	30400	11400	5750	1830	1920
13	385	3830	2360	21600	10200	16300	11600	22100	13100	4050	1460	1810
14	295	3360	2110	29400	49200	15300	10100	15300	19700	3200	1150	1680
15	373	3070	1920	46100	81400	15300	9130	12000	23800	2680	1030	2500
16	395	2520	1940	43700	100000	14900	8750	9890	32600	2130	839	8090
17	360	2000	2030	33300	106000	14000	8720	8530	35400	2240	988	21400
18	357	1780	1800	26200	100000	12700	8340	8430	40900	1650	1560	23900
19	334	5770	1550	18100	79400	11600	8220	7590	46400	2010	3490	15600
20	332	38800	1550	16100	47600	12200	7690	8980	43800	3580	5990	9140
21	360	54600	1700	14100	42200	19300	7160	9040	26400	4620	4880	5810
22	392	45900	4130	11900	60400	26000	6700	8090	17100	4280	3580	4430
23	400	28600	13400	9870	62300	28600	6250	11600	14800	3710	3120	7840
24	490	16500	25400	8840	58500	24200	5900	22100	13700	3010	2900	18300
25	514	10000	30200	7590	44100	17000	5630	27800	12400	2390	3770	22800
26	560	7500	36200	6770	22500	15800	5410	19600	10800	2000	5990	17800
27	676	8030	38500	5920	15200	15400	5440	13500	9460	1900	7260	11700
28	690	7050	24700	4670	16500	13000	5880	11300	10800	1740	4730	8470
29	737	7400	20700	4430	---	11600	5810	9320	10100	1580	3500	6970
30	709	7940	17000	4260	---	13800	4630	8420	10500	1510	2720	6030
31	568	---	15900	4140	---	20700	---	7450	---	1620	2060	---
TOTAL	19136	275515	292410	477190	1124900	709800	420760	461390	481400	127010	98357	224550
MEAN	617	9184	9433	15390	40170	22900	14030	14880	16050	4097	3173	7485
MAX	1710	54600	38500	46100	106000	60800	39400	36700	46400	10100	7260	23900
MIN	295	552	1550	4140	4320	11200	4630	5790	4120	1510	839	1500

CAL YR 1988 TOTAL 1829597 MEAN 4999 MAX 54600 MIN 148
WTR YR 1989 TOTAL 4712418 MEAN 12910 MAX 106000 MIN 295

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued
(National stream-quality accounting network station)
(National water-quality assessment network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to current year.
WATER TEMPERATURES: January 1973 to current year.

REMARKS.--Flow regulated by Buckhorn Lake, Herrington Lake, and hydroelectric plant at lock 7.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 660 microsiemens, Oct. 31, 1986; minimum daily, 100 microsiemens, Sept. 23, 1973.
WATER TEMPERATURES: Maximum daily, 33.0°C, Aug. 10, 11, 1980, July 29, 1988; minimum daily, 0.0°C, on several days during winters.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily observed, 603 microsiemens, Nov. 10, minimum daily observed, 156 microsiemens, Mar. 9.
WATER TEMPERATURES: Maximum daily observed, 30.0°C, July 26, 29, 31, Aug. 3; minimum daily observed, 0.5°C, Dec. 22, Feb. 9, 11-13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE AIR (DEG C)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
OCT 1988												
19...	1000	344	379	6.70	13.5	15.0	4.8	6.3	64	K12	K12	160
NOV												
16...	0915	2570	481	8.17	16.5	12.0	--	10.0	95	K12	23	190
22...	1045	46900	259	8.40	4.5	10.5	--	8.5	76	--	--	120
DEC												
21...	0930	1460	343	8.01	9.0	6.0	3.5	11.8	95	76	180	160
JAN 1989												
09...	1120	23100	325	7.35	3.5	7.0	--	12.0	100	--	--	140
14...	0900	31900	312	7.96	1.5	5.5	--	12.2	98	--	--	150
19...	0930	17000	238	7.73	9.0	6.0	--	12.4	101	K1400	12000	110
FEB												
15...	0945	92300	212	8.41	9.5	7.0	--	11.7	97	--	--	99
17...	1100	108000	206	7.75	2.0	6.5	--	--	--	--	--	94
24...	1045	59400	L169	7.47	-5.0	6.0	280	12.0	96	--	--	70
MAR												
22...	1030	28000	271	8.52	7.5	9.0	--	11.3	98	7400	10400	130
APR												
19...	0930	7680	294	7.34	8.5	11.5	12	10.8	101	130	K32	130
MAY												
12...	1035	30900	234	7.49	16.0	13.5	--	10.5	103	--	--	110
17...	1000	8170	262	7.15	17.5	17.5	--	10.1	107	K79	8400	100
25...	1130	28300	274	7.07	28.5	24.0	--	9.9	121	--	--	130
JUN												
21...	1000	25400	166	7.37	25.5	21.5	--	8.7	101	>12000	1400	81
JUL												
12...	0930	6070	278	8.06	26.5	25.0	44	7.8	97	K40	9700	120
AUG												
23...	0945	3250	317	7.85	30.5	27.0	12	7.0	90	1400	K25	150

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued

(National stream-quality accounting network station)
(National water-quality assessment network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)
OCT 1988												
19...	70	46	11	17	18	0.6	4.2	91	111	--	91	61
NOV												
16...	71	53	13	26	23	0.9	4.1	111	141	116	116	68
22...	36	35	7.2	6.8	11	0.3	3.3	80	97	--	81	36
DEC												
21...	55	47	10	9.5	11	0.3	2.3	102	116	4	104	51
JAN 1989												
09...	49	42	7.5	7.1	10	0.3	3.1	86	105	--	87	42
14...	27	43	9.3	8.0	10	0.3	2.2	95	116	--	95	52
19...	35	33	7.1	4.5	8	0.2	1.9	77	94	--	78	38
FEB												
15...	0	32	4.7	3.2	6	0.1	2.4	111	135	--	109	27
17...	25	30	4.5	3.0	6	0.1	2.3	67	82	--	69	24
24...	36	20	4.9	3.9	11	0.2	1.6	34	42	--	34	29
MAR												
22...	49	40	7.2	5.4	8	0.2	2.0	70	83	1	72	50
APR												
19...	48	38	8.2	5.3	8	0.2	1.7	79	96	--	79	41
MAY												
12...	39	33	7.7	4.1	7	0.2	2.1	81	99	--	84	37
17...	38	29	7.2	4.6	9	0.2	1.7	64	78	--	62	40
25...	55	37	9.6	6.2	9	0.2	2.0	76	93	--	78	52
JUN												
21...	32	23	5.6	2.8	7	0.1	2.2	53	65	--	53	32
JUL												
12...	55	34	9.4	6.1	10	0.2	2.2	67	82	--	66	53
AUG												
23...	51	43	9.5	8.5	11	0.3	3.1	99	121	--	99	49

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	BROMIDE DIS-SOLVED (MG/L AS BR)	IODIDE, DIS-SOLVED (MG/L AS I)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)
OCT 1988												
19...	22	0.20	0.075	--	4.3	227	225	0.31	211	0.94	0.01	0.03
NOV												
16...	40	--	0.17	--	4.1	276	287	0.38	1920	1.69	0.01	--
22...	10	0.20	0.030	--	4.8	161	158	0.22	20400	1.17	0.03	--
DEC												
21...	12	0.20	0.033	--	5.8	206	208	0.28	812	1.58	0.02	0.05
JAN 1989												
09...	10	0.10	0.036	0.005	5.7	185	177	0.25	11500	1.49	0.01	--
14...	10	0.10	0.033	--	6.2	185	209	0.25	15900	1.49	0.01	--
19...	5.9	0.10	0.016	--	6.4	158	149	0.21	9130	1.19	0.01	--
FEB												
15...	4.8	0.10	<0.010	--	4.6	115	152	0.16	28700	1.48	0.02	--
17...	4.9	0.10	0.010	--	4.5	109	121	0.15	35900	1.18	0.02	--
24...	6.4	0.10	0.033	--	5.3	97	95	0.13	15600	--	<0.01	0.06
MAR												
22...	6.6	--	<0.010	--	5.4	165	171	0.22	12500	1.08	0.02	--
APR												
19...	6.3	0.10	0.020	--	5.3	161	159	0.22	3340	--	<0.01	0.01
MAY												
12...	3.5	0.10	<0.010	--	5.9	143	141	0.19	11900	0.47	0.02	--
17...	4.8	--	0.010	--	6.3	130	134	0.18	2870	--	<0.01	--
25...	6.0	0.10	0.020	--	6.4	165	169	0.22	12600	0.69	0.01	--
JUN												
21...	1.9	--	0.010	--	6.5	117	106	0.16	8090	0.46	0.01	0.21
JUL												
12...	7.4	0.10	0.020	--	6.0	168	163	0.23	2750	0.74	0.02	0.03
AUG												
23...	9.2	0.20	0.020	--	4.4	197	187	0.27	1730	0.49	0.01	0.10

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued
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WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHOROUS TOTAL (MG/L AS P)	PHOSPHOROUS DISSOLVED (MG/L AS P)	PHOSPHOROUS ORTHO, DISSOLVED (MG/L AS P)	PHOSPHOROUS ORGANIC TOTAL (MG/L AS P)	ALUMINUM, DISSOLVED (UG/L AS AL)	ANTIMONY, DISSOLVED (UG/L AS SB)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
OCT 1988												
19...	0.02	0.47	0.95	0.5	0.16	0.12	0.10	0.16	<10	<1	1	41
NOV												
16...	0.02	--	1.70	0.6	0.24	--	0.20	0.24	<10	--	1	47
22...	0.04	--	1.20	2.1	0.62	--	0.05	0.62	50	<1	1	33
DEC												
21...	0.05	0.25	1.60	0.3	0.12	0.10	0.08	0.12	10	--	1	34
JAN 1989												
09...	0.03	--	1.50	1.3	0.17	--	0.11	0.17	40	<1	<1	23
14...	0.03	--	1.50	0.5	0.25	--	0.07	0.25	50	<1	<1	26
19...	0.03	--	1.20	0.4	0.07	--	0.05	0.07	80	<1	<1	22
FEB												
15...	0.05	--	1.50	1.1	1.00	--	0.15	1.0	70	<1	<1	15
17...	0.05	--	1.20	0.6	0.82	--	0.32	0.82	80	<1	<1	17
24...	0.03	1.0	0.63	1.1	0.39	0.02	0.02	0.39	100	--	<1	18
MAR												
22...	0.04	--	1.10	0.7	0.44	--	0.11	0.44	80	--	<1	21
APR												
19...	0.01	0.29	0.85	0.3	0.11	0.07	0.06	0.11	30	<1	<1	22
MAY												
12...	0.02	--	0.49	0.3	0.47	--	0.05	0.47	50	<1	<1	21
17...	0.02	--	0.48	<0.2	0.09	--	0.04	0.09	20	--	<1	22
25...	0.03	--	0.70	1.0	0.09	--	0.05	0.09	30	<1	<1	27
JUN												
21...	0.09	0.99	0.47	1.2	0.03	0.02	0.01	0.03	50	--	<1	23
JUL												
12...	0.02	0.47	0.76	0.5	0.12	0.07	0.04	0.12	20	<1	<1	30
AUG												
23...	0.09	0.50	0.50	0.6	0.16	0.09	0.08	0.16	20	--	<1	32

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	BORON, DISSOLVED (UG/L AS B)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)
OCT 1988												
19...	<0.5	30	0.1	0.7	<3	1.7	8	<0.5	13	30	<10	2
NOV												
16...	<0.5	50	0.3	<0.5	<3	<0.5	9	<0.5	11	14	<10	<10
22...	<0.5	20	0.3	<0.5	<3	3.4	85	<0.5	5	30	<10	<10
DEC												
21...	<0.5	20	0.1	<0.5	<3	1.6	9	<0.5	8	49	<10	<10
JAN 1989												
09...	<0.5	20	0.1	<0.5	<3	0.9	73	<0.5	5	4	<10	<10
14...	<0.5	20	<0.1	<0.5	<3	1.0	63	<0.5	<4	14	<10	<10
19...	<0.5	20	<0.1	<0.5	<3	1.5	100	<0.5	<4	4	<10	<10
FEB												
15...	<0.5	20	0.1	1.5	<3	0.8	100	<0.5	4	20	<10	<10
17...	<0.5	10	0.2	<0.5	<3	1.3	110	<0.5	<4	20	<10	<10
24...	<0.5	<10	0.1	<0.5	<3	1.2	160	<0.5	<4	15	<10	<10
MAR												
22...	<0.5	10	0.1	<0.5	<3	3.2	100	<0.5	5	8	<10	<10
APR												
19...	<0.5	20	<0.2	0.8	<3	0.8	26	<0.8	5	22	<10	6
MAY												
12...	<0.5	<10	<0.1	<0.5	<3	2.5	57	<0.5	<4	3	<10	<10
17...	<0.5	20	0.4	<0.5	<3	0.9	24	<0.5	4	8	<10	<10
25...	<0.5	<10	0.2	1.5	<3	1.4	24	0.7	6	2	<10	<10
JUN												
21...	<0.5	20	0.8	<0.5	<3	1.7	97	<0.5	<4	5	<10	<10
JUL												
12...	<0.5	30	0.4	<0.5	<3	1.1	34	<0.5	4	6	<10	<1
AUG												
23...	<0.5	40	7.9	<0.5	<3	3.7	13	<0.5	4	5	<10	<10

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WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	PHOS-PHOROUS ORGANIC DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1988											
19...	<1	<1.0	300	<6	7	0.02	3.5	0.3	7	6.5	89
NOV											
16...	--	<1.0	430	<6	55	--	2.8	0.2	13	90	63
22...	<1	1.0	150	<6	11	--	3.1	>2.6	--	--	--
DEC											
21...	<1	<1.0	180	<6	<3	0.02	1.9	0.2	5	20	87
JAN 1989											
09...	<1	<1.0	140	<6	6	--	2.6	2.1	--	--	--
14...	<1	2.0	170	<6	3	--	2.3	0.9	95	8180	82
19...	<1	<1.0	110	<6	9	--	2.3	2.4	202	11700	91
FEB											
15...	<1	<1.0	86	<6	<3	--	3.7	>2.5	463	115000	95
17...	<1	<1.0	71	<6	37	--	--	--	--	--	--
24...	--	<1.0	91	<6	<3	0.0	2.9	>2.5	468	75100	89
MAR											
22...	--	1.0	120	<6	7	--	5.2	>2.4	160	12100	86
APR											
19...	<1	<1.0	130	<6	5	0.01	4.4	0.6	18	373	94
MAY											
12...	<1	1.0	130	<6	13	--	6.0	>2.5	298	24900	93
17...	--	2.0	130	<6	<3	--	2.8	0.4	42	926	94
25...	<1	<1.0	180	<6	6	--	2.1	>2.5	--	--	--
JUN											
21...	<1	<1.0	100	<6	<3	0.01	3.0	>2.4	595	40800	96
JUL											
12...	<1	<1.0	180	<6	3	0.03	2.6	0.6	56	921	97
AUG											
23...	--	<1.0	200	<6	10	0.01	3.7	0.6	18	161	91

DATE	TIME	GROCS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	CYANIDE DIS-SOLVED (MG/L AS CN)
OCT 1988								
19...	1000	<0.4	<0.4	5.5	0.8	4.0	0.8	<0.01
NOV								
22...	1045	<0.4	17	3.8	17	2.9	15	<0.01
JAN 1989								
09...	1120	0.6	11	2.4	5.8	1.8	5.0	<0.01
14...	0900	<0.4	3.1	2.7	3.2	2.0	3.0	<0.01
19...	0930	<0.4	7.2	2.1	7.6	1.7	6.6	<0.01
FEB								
15...	0945	<0.4	8.6	2.8	6.6	2.1	5.7	<0.01
17...	1100	<0.4	41	2.8	19	2.3	17	<0.01
APR								
19...	0930	<0.4	0.7	2.3	1.1	1.8	1.1	<0.01
MAY								
12...	1035	0.5	30	2.3	15	1.8	13	<0.01
25...	1130	<0.4	7.8	2.8	6.9	2.2	6.1	<0.01
JUL								
12...	0930	<0.4	2.8	3.2	3.0	2.4	2.8	<0.01

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued

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WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1988								
22...	1045	7700	200	<10	40	<1	10	20
JAN 1989								
09...	1120	3400	<100	10	20	<1	7	10
14...	0900	1500	<100	<10	30	1	5	10
FEB								
15...	0945	8200	<100	<10	40	<1	13	20
17...	1100	6400	100	<10	[illegible]0	<1	8	20
MAY								
12...	1035	5400	<100	<10	90	<1	8	10
25...	1130	2700	<100	<10	30	<1	5	<10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 1988							
22...	13000	8	960	<1	21	<1	60
JAN 1989							
09...	5900	11	340	5	6	1	30
14...	2600	<5	160	4	4	<1	20
FEB							
15...	14000	18	980	4	15	<1	70
17...	10000	26	590	3	11	<1	50
MAY							
12...	10000	18	490	3	12	<1	40
25...	5100	14	270	6	6	<1	30

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1988												
17...	1120	10.0	8.0	494	8.68	570	32	<2.5	<2.5	<2.5	8.9	<2.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
NOV 1988												
17...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued

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WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
NOV 1988												
17...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITRO-SODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
NOV 1988												
17...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRA-CENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<1500	<250	31000	<500	<250	<250	<250	<500	<250	<250

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

DATE	4-BROMOPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLOROPHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITROPHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHOCRESOL BOT.MAT (UG/KG)	PHENOL (C6H5OH) BOT.MAT (UG/KG)	PENTACHLOROPHENOL BOT.MAT (UG/KG)	BIS(2-ETHYLHEXYL) PHTHALATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHALATE BOT.MAT (UG/KG)	BENZIDINE BOT.MAT (UG/KG)	HEXACHLOROBENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXACHLOROBUTADIENCE BOT.MAT (UG/KG)
NOV 1988											
17...	<250	<250	<1500	<1500	<250	<1500	4400	<250	<2500	<250	<250

03290500 KENTUCKY RIVER AT LOCK 2, AT LOCKPORT, KY--Continued
(National stream-quality accounting network station)
(National water-quality assessment network station)

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	313	---	324	247	260	294	---	---	359	502
2	---	535	275	---	312	252	286	287	---	272	354	500
3	---	---	307	320	214	---	293	283	223	272	352	494
4	---	552	324	311	279	261	233	287	268	---	343	---
5	---	570	---	331	286	---	274	320	247	---	325	416
6	---	563	330	338	271	244	---	332	265	---	311	429
7	---	577	347	307	285	234	307	352	271	285	300	413
8	---	576	355	287	266	235	288	428	281	275	302	---
9	---	568	336	312	236	156	292	299	279	276	303	---
10	---	603	---	318	---	171	290	258	275	276	---	---
11	---	---	---	301	237	215	284	254	286	---	329	---
12	---	547	---	265	236	218	302	---	306	---	345	389
13	---	469	364	300	305	227	290	230	---	---	338	381
14	---	500	355	342	220	243	288	233	303	---	349	375
15	---	517	---	351	---	---	---	266	335	---	---	354
16	---	496	---	---	---	250	---	238	287	267	---	341
17	---	469	---	250	---	---	293	241	296	280	---	---
18	---	525	345	---	---	266	---	---	260	296	---	---
19	---	---	352	---	186	271	299	245	216	305	307	388
20	---	---	365	261	183	289	301	252	184	315	339	---
21	---	349	330	269	205	---	---	263	203	346	341	---
22	---	264	370	268	224	260	288	271	226	340	331	276
23	---	333	341	281	216	283	290	289	243	355	358	261
24	---	---	---	---	---	283	285	294	250	342	397	---
25	---	---	---	283	---	---	283	---	254	352	368	---
26	---	234	---	282	---	---	296	---	---	354	367	274
27	---	249	282	284	239	267	299	---	248	357	406	307
28	---	260	208	300	---	---	289	321	256	347	431	296
29	---	286	237	296	---	247	273	282	267	351	464	291
30	---	277	---	300	---	---	293	258	278	349	469	294
31	---	---	287	308	---	267	---	236	---	350	490	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	9.0	---	8.0	8.0	11.0	17.0	---	---	28.0	27.0
2	---	14.0	9.0	---	8.0	8.0	11.0	15.0	---	22.0	28.0	27.0
3	---	---	9.0	6.0	8.0	---	11.0	15.0	22.0	22.0	30.0	25.0
4	---	14.0	8.0	6.0	6.0	8.0	11.0	15.0	24.0	---	28.0	---
5	---	13.0	7.0	6.0	6.0	---	11.0	17.0	23.0	---	29.0	27.0
6	---	12.0	9.0	6.0	6.0	8.0	---	16.0	24.0	---	27.0	27.0
7	---	14.0	8.0	6.0	6.0	6.0	13.0	16.0	24.0	22.0	26.0	27.0
8	---	13.0	7.0	7.0	6.0	6.0	11.0	17.0	25.0	23.0	27.0	---
9	---	13.0	9.0	6.0	5.0	7.0	11.0	17.0	27.0	25.0	26.0	---
10	---	13.0	---	6.0	---	6.0	12.0	15.0	27.0	25.0	---	---
11	---	---	---	7.0	5.0	6.0	12.0	15.0	24.0	---	26.0	---
12	---	12.0	---	6.0	5.0	6.0	13.0	---	24.0	---	27.0	26.0
13	---	12.0	6.0	8.0	5.0	7.0	12.0	15.0	---	---	26.0	26.0
14	---	12.0	7.0	8.0	7.0	8.0	13.0	14.0	25.0	---	27.0	26.0
15	---	12.0	---	8.0	---	---	---	17.0	25.0	---	---	25.0
16	---	12.0	---	---	---	9.0	---	17.0	24.0	26.0	---	24.0
17	---	11.0	---	8.0	---	---	14.0	16.0	20.0	26.0	---	---
18	---	11.0	7.0	---	---	9.0	---	---	20.0	26.0	---	---
19	---	---	6.0	---	7.0	9.0	14.0	17.0	20.0	26.0	26.0	23.0
20	---	---	7.0	6.0	7.0	9.0	14.0	17.0	20.0	26.0	25.0	---
21	---	11.0	6.0	6.0	7.0	---	---	17.0	24.0	26.0	25.0	---
22	---	11.0	5.0	6.0	7.0	8.0	15.0	18.0	19.0	28.0	25.0	23.0
23	---	11.0	7.0	6.0	7.0	8.0	15.0	18.0	20.0	27.0	25.0	20.0
24	---	---	---	---	---	8.0	14.0	18.0	20.0	27.0	24.0	---
25	---	---	---	7.0	---	---	15.0	---	22.0	28.0	24.0	---
26	---	11.0	---	6.0	---	---	15.0	---	---	30.0	25.0	19.0
27	---	10.0	8.0	7.0	7.0	11.0	15.0	---	22.0	29.0	26.0	18.0
28	---	10.0	6.0	7.0	7.0	---	15.0	19.0	22.0	28.0	27.0	18.0
29	---	9.0	6.0	7.0	---	12.0	18.0	20.0	22.0	30.0	26.0	18.0
30	---	9.0	---	7.0	---	---	18.0	20.0	22.0	29.0	27.0	19.0
31	---	---	6.0	8.0	---	11.0	---	20.0	---	30.0	27.0	---

03291500 EAGLE CREEK AT GLENCOE, KY

LOCATION.--Lat 38°42'18", long 84°49'26", Owen County, Hydrologic Unit 05100205, on left bank 600 ft upstream from bridge on U.S. Highway 127, 0.6 mi south of Glencoe, 5.8 mi downstream from Tenmile Creek, and at mile 21.6.

DRAINAGE AREA.--437 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1915 to September 1918, October 1918 to December 1920 (gage heights only), May 1928 to September 1931, June 1938 to September 1977, December 1988 to current year. Monthly discharge only for May 1915, June 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1916-17, 1920(M). WSP 1555: Drainage area. WSP 1908: 1939-40(M), 1943(M), 1945(M), 1948(P), 1950(M), 1956-57(P), 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 508.52 ft above National Geodetic Vertical Datum of 1929. Prior Oct. 1, 1950, nonrecording gages at same site and datum. Oct. 1, 1950 to Oct. 19, 1960, nonrecording gage 600 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 18-21, 23, 24, 26, 27, 29 to Jan 24, Feb. 2 to Mar. 27, Apr. 1-14, 16, 19, 20, May 2-14, 17, 20, July 15-17, 20, 24, 29 to Aug. 5, 12, 14-21, 23. Water discharge records poor.

AVERAGE DISCHARGE.--45 years (Water years 1916-18, 1929-31, 1939-77), 560 ft^3/s, 17.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,200 ft^3/s, Mar. 10, 1964; gage height, 26.05 ft, from floodmark; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1913 reached a stage of about 23.0 ft, present site. Flood of January 1937 reached a stage of 21.7 ft, discharge, 33,600 ft^3/s, present site.

EXTREMES FOR CURRENT PERIOD.--December 1988 to September 1989: Maximum daily discharge, 17,000 ft^3/s, Feb. 15; minimum daily discharge, 3.2 ft^3/s, Aug. 2, 3, 17-19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	116	108	255	330	429	434	77	60	3.6	21
2	---	---	79	113	900	300	1060	240	414	51	3.2	20
3	---	---	61	261	4200	250	1130	180	135	38	3.2	26
4	---	---	51	400	2500	800	12600	126	500	30	3.6	22
5	---	---	43	640	1500	7000	4110	199	3290	26	12	19
6	---	---	38	1000	900	5000	1180	626	958	21	20	19
7	---	---	35	1700	540	3500	808	626	530	18	14	17
8	---	---	32	2500	380	2300	493	378	283	15	11	14
9	---	---	29	1200	210	1600	248	1360	204	13	9.0	11
10	---	---	29	700	190	1200	248	3560	163	12	8.4	11
11	---	---	28	1000	400	860	493	1130	103	9.8	6.8	9.2
12	---	---	23	1700	1000	600	440	567	72	8.4	4.9	8.9
13	---	---	21	2600	2200	450	339	378	61	7.5	4.7	9.1
14	---	---	21	5200	5000	350	292	283	75	6.4	4.2	22
15	---	---	20	3500	17000	283	212	314	93	5.5	4.0	44
16	---	---	20	2000	8000	199	168	520	732	5.1	3.6	27
17	---	---	19	1200	4000	180	146	429	620	4.7	3.2	20
18	---	---	18	700	2500	161	149	261	275	4.7	3.2	17
19	---	---	17	600	1100	143	638	193	171	4.8	3.2	16
20	---	---	16	500	2000	143	578	306	716	5.1	3.6	14
21	---	---	15	400	6400	161	345	526	599	4.9	7.7	26
22	---	---	14	300	3000	283	177	330	333	4.9	9.6	28
23	---	---	161	250	1600	687	162	718	167	4.9	19	143
24	---	---	538	210	1100	538	117	1130	93	9.9	352	1090
25	---	---	106	259	800	403	104	537	54	14	329	453
26	---	---	143	245	600	329	93	563	40	10	154	223
27	---	---	306	217	480	261	81	318	32	6.7	90	117
28	---	---	117	246	400	214	84	284	35	5.0	87	59
29	---	---	110	227	---	360	2830	193	54	4.3	45	39
30	---	---	126	222	---	3230	938	135	37	4.0	32	29
31	---	---	126	249	---	91	---	101	---	4.0	25	---
TOTAL	---	---	2478	30447	69155	32206	30692	16945	10916	418.6	1279.7	2574.2
MEAN	---	---	79.9	982	2470	1039	1023	547	364	13.5	41.3	85.8
MAX	---	---	538	5200	17000	7000	12600	3560	3290	60	352	1090
MIN	---	---	14	108	190	91	81	101	32	4.0	3.2	8.9
CFSM	---	---	.18	2.25	5.65	2.38	2.34	1.25	.83	.03	.09	.20
IN.	---	---	.21	2.59	5.89	2.74	2.61	1.44	.93	.04	.11	.22

03291500 EAGLE CREEK AT GLENCOE, KY

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-76, June 1988 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Water years 1949-74.
SUSPENDED SEDIMENT: Water years 1961-68.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section. Records of water quality for the water years 1949-76 are published in reports of the U.S. Geological Survey.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOL (C6H-5OH) TOTAL (UG/L)	DI-BROMO-METHANE WATER WHOLE RECOVER (UG/L)	DI-CHLORO-BROMO-METHANE TOTAL (UG/L)	CARBON-TETRA-CHLO-RIDE TOTAL (UG/L)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L)	BROMO-FORM TOTAL (UG/L)
FEB 1989											
13...	1500	264	7.50	2.5	3.4	<5.0	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
06...	1650	608	8.27	21.0	8.4	<5.0	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	TOLUENE TOTAL (UG/L)	BENZENE TOTAL (UG/L)	CHLORO-BENZENE TOTAL (UG/L)	CHLORO-ETHANE TOTAL (UG/L)	ETHYL-BENZENE TOTAL (UG/L)	METHYL-BROMIDE TOTAL (UG/L)	METHYL-CHLO-RIDE TOTAL (UG/L)	METHYL-ENE CHLO-RIDE TOTAL (UG/L)	PARA-CHLORO-META CRESOL TOTAL (UG/L)
FEB 1989											
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<30.0
JUN											
06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<30.0

DATE	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L)	TRI-CHLORO-FLUORO-METHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2-TRI-CHLORO-ETHANE TOTAL (UG/L)	1,1,2,2 TETRA-CHLORO-ETHANE TOTAL (UG/L)	1,2-DI-CHLORO-BENZENE TOTAL (UG/L)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L)	1,3-DI-CHLORO-BENZENE TOTAL (UG/L)	1,4-DI-CHLORO-BENZENE TOTAL (UG/L)
FEB 1989											
13...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
JUN											
06...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

DATE	2-CHLORO-PHENOL TOTAL (UG/L)	2-NITRO-PHENOL TOTAL (UG/L)	2,4-DI-CHLORO-PHENOL TOTAL (UG/L)	2,4-DI-METHYL-PHENOL TOTAL (UG/L)	2,4,-DI-NITRO-PHENOL TOTAL (UG/L)	2,4,6-TRI-CHLORO-PHENOL TOTAL (UG/L)	4-NITRO-PHENOL TOTAL (UG/L)	4,6-DINITRO -ORTHO-CRESOL TOTAL (UG/L)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (UG/L)	TRANS-1,3-DI-CHLORO-PROPENE TOTAL (UG/L)	CIS 1,3-DI-CHLORO-PROPENE TOTAL (UG/L)
FEB 1989											
13...	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20	<0.20
JUN											
06...	<5.0	<5.0	<5.0	<5.0	<20.0	<20.0	<30.0	<30.0	<0.20	<0.20	<0.20

DATE	PENTA-CHLORO-PHENOL TOTAL (UG/L)	STYRENE TOTAL (UG/L)	123-TRI CHLORO-PROPANE WATER WHOLE TOTAL (UG/L)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L)	VINYL CHLO-RIDE TOTAL (UG/L)	XYLENE TOTAL WATER WHOLE TOT REC (UG/L)	BROMO-BENZENE WATER, WHOLE, TOTAL (UG/L)	1,1-DI CHLORO-PRO-PENE, WAT, WH TOTAL (UG/L)	2,2-DI CHLORO-PRO-PANE WAT, WH TOTAL (UG/L)	1,3-DI CHLORO-PRO-PANE, WAT. WH TOTAL (UG/L)	ORTHO-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)
FEB 1989											
13...	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	--	--	--	--	--
JUN											
06...	<30.0	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.2	<0.20	<0.20	<0.20

03291500 EAGLE CREEK AT GLENCOE, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	PARA-CHLORO-TOLUENE WATER, WHOLE, TOTAL (UG/L)	1,1,1,2 TETRA-CHLORO-ETHANE, WAT, WH TOTAL (UG/L)	1,2-DIBROMO ETHANE WATER WHOLE TOTAL (UG/L)	1,2-DI-CHLORO-ETHENE WATER WHOLE RECOVER (UG/L)	DI-AZINON, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	MALA-THION, TOTAL (UG/L)	METHYL TRI-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	PARA-THION, TOTAL (UG/L)	TOTAL TRI-THION (UG/L)
FEB 1989											
13...	--	--	<0.2	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
JUN											
06...	<0.20	<0.20	<0.2	<0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

DATE	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SEVIN, TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	ALA-CHLOR TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	PICLO-RAM (TOR-DON) (AMDON) TOTAL (UG/L)	DICAMBA (MED-IBEN) (BAN-VEL D) TOTAL (UG/L)	2, 4-DP TOTAL (UG/L)	AME-TRYNE TOTAL
FEB 1989											
13...	<0.01	<0.01	<0.50	<0.01	<0.10	<0.10	<0.10	<0.01	<0.01	<0.01	<0.10
JUN											
05...	<0.01	<0.01	--	<0.01	0.10	<0.10	0.20	<0.01	<0.01	<0.01	<0.10

DATE	METRI-BUZIN WATER WHOLE TOT.REC (UG/L)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L)	PRO-PAZINE TOTAL (UG/L)	TRI-FLURA-LIN TOTAL RECOVER (UG/L)	METHO-MYL TOTAL (UG/L)	PROPHAM TOTAL (UG/L)	SIME-TRYNE TOTAL (UG/L)	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)
FEB 1989										
13...	<0.1	<0.1	<0.10	<0.10	<0.5	<0.5	<0.1	<0.10	<0.1	<0.1
JUN										
06...	<0.1	<0.1	<0.10	<0.10	--	--	<0.1	0.10	<0.1	<0.1

HARRODS CREEK BASIN

03292460 HARRODS CREEK NEAR LA GRANGE, KY

LOCATION.--Lat 38°26'50", long 85°24'33", Oldham County, Hydrologic Unit 05140101, 40 ft upstream from bridge on State Highway 53, 0.5 mi upstream from Ash Run, 3.1 mi northwest of La Grange and at mile 22.4.

DRAINAGE AREA.--24.1 mi^2.

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 662.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--21 years (Water years 1969-89), 36.9 ft^3/s, 20.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft^3/s, April 4, 1989, gage height, 9.80 ft; maximum gage height, 9.93 ft, Sept. 4, 1979; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 14	0300	2,720	7.22	Apr. 4	0330	*6,100	*9.80

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	5.3	50	14	17	90	8.7	2.5	3.2	20	.90
2	.00	.03	4.0	33	19	17	43	6.4	1.9	3.0	11	1.3
3	.00	.03	3.3	23	765	16	104	4.5	.65	82	6.2	1.2
4	.00	.12	2.7	17	122	15	1480	3.6	7.4	371	5.3	.40
5	.00	.38	2.4	16	63	307	73	90	64	157	4.4	.34
6	.00	.32	2.1	170	39	256	34	71	14	42	16	.03
7	.00	.80	1.8	65	28	68	23	23	4.8	20	9.2	.00
8	.00	.52	1.6	354	24	40	52	12	2.3	15	4.1	.00
9	.00	.37	1.5	55	18	31	39	279	22	17	1.1	.00
10	.00	2.4	1.5	30	16	25	22	91	7.7	8.1	.79	.69
11	.00	4.0	1.2	86	14	21	16	30	3.0	7.1	.49	.95
12	.00	2.2	.79	348	14	18	12	17	2.1	11	.19	.17
13	.00	1.9	.66	94	515	19	8.6	12	2.0	12	.01	.00
14	.00	1.6	.81	359	902	19	7.0	8.6	2.8	6.8	.00	7.5
15	.00	.95	.94	154	1080	19	6.5	9.9	3.5	4.8	.00	6.3
16	.00	.77	.96	59	367	15	5.4	9.3	11	4.1	.00	1.9
17	.00	.72	.77	36	88	14	4.5	6.7	4.0	3.5	.04	.67
18	.00	.51	.66	28	50	13	14	5.2	2.1	2.2	.00	.27
19	.00	63	.66	22	36	12	19	8.4	146	215	.00	.14
20	.00	261	.73	19	57	357	9.2	24	182	105	1.2	.13
21	.00	21	2.1	15	370	276	6.5	18	33	20	129	.00
22	.00	7.3	5.4	14	95	59	5.4	14	13	11	27	.10
23	.00	4.2	31	13	51	32	4.4	121	8.3	5.5	47	.41
24	.08	2.9	250	12	37	24	4.6	24	5.4	3.4	58	.59
25	.08	2.4	56	11	31	18	3.8	18	3.9	3.0	13	.88
26	.07	3.9	22	21	30	15	3.0	15	3.1	7.3	8.1	.77
27	.05	76	15	27	24	13	2.8	12	2.5	14	5.4	.30
28	.03	17	497	19	20	11	2.8	10	59	14	3.8	.15
29	.03	8.9	82	17	---	79	111	7.7	7.1	13	3.1	.11
30	.03	6.4	39	18	---	174	17	6.2	3.0	13	2.1	.07
31	.03	---	28	16	---	500	---	4.7	---	33	.90	---
TOTAL	0.40	491.65	1061.88	2201	4889	2500	2223.5	970.9	624.05	1227.0	377.42	26.27
MEAN	.013	16.4	34.3	71.0	175	80.6	74.1	31.3	20.8	39.6	12.2	.88
MAX	.08	261	497	359	1080	500	1480	279	182	371	129	7.5
MIN	.00	.03	.66	11	14	11	2.8	3.6	.65	2.2	.00	.00
CFSM	.00	.68	1.42	2.95	7.25	3.35	3.08	1.30	.86	1.64	.51	.04
IN.	.00	.76	1.64	3.40	7.55	3.86	3.42	1.50	.96	1.89	.58	.04

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CAL YR 1988   TOTAL  8176.58  MEAN 22.3  MAX  997  MIN .00  CFSM  .93  IN. 12.62
WTR YR 1989   TOTAL 16593.07  MEAN 45.5  MAX 1480  MIN .00  CFSM 1.89  IN. 25.61
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03292473 HARRODS CREEK NEAR PROSPECT, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°20'06", long 85°36'09", Jefferson County, Hydrologic Unit 05140101, at site off Hunting Creek Drive, 0.9 mi above Wolf Creek, and at mile 3.0.

DRAINAGE AREA.--92.1 mi^2.

PERIOD OF RECORD.--March 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
OCT						
13...	0900	732	7.90	8.0	6.2	52
26...	0920	618	8.25	7.0	6.8	55
NOV						
09...	0900	647	8.80	8.0	9.6	80
23...	1000	499	9.00	5.5	10.2	80
DEC						
07...	0920	618	8.95	3.0	12.4	91
21...	0900	659	8.80	4.5	12.5	96
JAN						
11...	0940	467	8.10	4.0	12.1	92
25...	0900	486	7.97	7.5	11.6	96
FEB						
08...	0930	482	8.00	0.5	12.8	88
23...	0915	274	7.90	3.0	11.9	88
MAR						
08...	0915	412	8.19	4.0	13.0	97
22...	0900	388	7.86	6.0	12.3	96
APR						
21...	0923	341	7.24	15.0	8.9	86
MAY						
04...	0840	470	7.98	13.0	10.4	97
17...	0940	446	7.80	16.5	9.3	95
JUN						
01...	0915	475	7.38	24.5	5.0	59
14...	0925	481	7.77	22.0	7.0	79
28...	0925	502	7.40	24.5	6.4	76
JUL						
13...	1020	465	6.80	24.5	7.8	93
26...	0910	497	7.15	26.0	7.8	94
AUG						
09...	1000	474	7.60	20.5	6.5	71
23...	0950	337	8.35	25.5	6.6	80
SEP						
14...	0930	489	7.40	22.0	--	--
20...	0920	455	7.90	18.0	6.4	68

03292474 GOOSE CREEK AT OLD WESTPORT ROAD NEAR ST. MATTHEWS, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°16'33",long 85°36'22", Jefferson County, Hydrologic Unit 05140101, at bridge on Old Westport Road and at mile 5.5.

DRAINAGE AREA.--6.0 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
13...	1320	1.6	727	8.10	10.5	11.9	106
21...	1320	8.6	450	8.40	8.5	11.3	96
26...	1400	2.1	550	7.75	7.5	11.8	98
NOV							
09...	1325	2.6	686	8.20	13.0	13.6	129
23...	1320	6.5	600	8.50	10.0	11.4	100
DEC							
07...	1400	2.9	614	8.28	10.0	12.1	107
JAN							
11...	1400	12	480	8.20	8.0	11.0	94
25...	1400	6.7	505	8.42	13.5	13.6	131
FEB							
08...	1340	14	461	7.70	6.5	12.9	104
23...	1415	26	399	7.60	7.5	11.6	97
MAR							
08...	1330	21	412	8.18	9.0	12.8	109
22...	1330	19	410	7.92	12.0	14.1	128
APR							
05...	1340	68	336	7.22	13.0	10.0	94
21...	1445	6.2	426	9.00	20.0	15.8	172
MAY							
04...	1030	8.2	456	8.32	13.0	13.4	125
17...	1410	7.7	454	8.40	20.0	11.1	121
JUN							
01...	1400	3.8	493	8.15	27.0	12.4	153
14...	1330	5.1	466	7.44	21.0	10.7	119
28...	1315	2.0	531	7.50	24.5	9.3	110
JUL							
13...	1345	1.8	480	6.60	26.0	9.6	118
26...	1400	2.8	526	7.95	27.0	9.8	121
AUG							
09...	1400	1.5	547	7.50	21.5	10.9	122
23...	1410	38	593	7.69	24.0	9.4	111
SEP							
14...	1410	1.7	618	6.40	22.0	7.1	82
20...	1145	2.0	588	6.50	18.5	9.5	102

GOOSE CREEK BASIN

03292475 GOOSE CREEK AT U.S. HWY 42 NEAR GLENVIEW ACRES, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°18'12", long 85°37'41", Jefferson County, Hydrologic Unit 05140101, at culvert on U.S. Highway 42, 1.7 mi above Little Goose Creek, and at mile 2.1.

DRAINAGE AREA.--10.1 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
13...	1010	1.8	480	7.90	6.5	11.0	89
26...	1100	2.8	667	7.93	6.5	11.1	90
NOV							
09...	1015	3.6	685	8.10	8.0	10.9	91
23...	1050	9.5	570	9.00	6.0	12.4	99
DEC							
07...	1045	4.1	623	8.10	7.0	12.2	101
21...	1020	25	575	7.80	7.5	11.4	94
JAN							
11...	1100	18	497	7.90	6.0	11.9	96
25...	1020	8.3	520	7.74	9.5	12.4	107
FEB							
08...	1100	21	482	7.73	2.5	13.0	94
23...	1045	42	429	8.10	3.5	12.3	92
MAR							
08...	1030	34	451	8.07	4.5	13.4	102
22...	1010	28	437	7.85	6.5	14.3	115
APR							
05...	1015	99	348	7.64	11.0	10.9	97
21...	1115	10	371	8.03	14.5	11.2	108
MAY							
04...	0930	12	489	8.18	12.0	9.9	90
17...	1100	11	478	7.70	15.5	9.5	94
JUN							
01...	1030	5.1	511	7.33	22.5	8.2	93
14...	1020	9.4	499	7.82	20.5	8.2	90
28...	1020	2.6	558	7.50	22.5	9.2	105
JUL							
13...	1115	2.6	519	6.80	23.0	8.4	97
26...	1000	3.5	544	7.55	24.0	8.5	99
AUG							
09...	1105	2.3	571	7.60	18.0	8.8	91
23...	1100	3.2	509	7.74	22.5	9.6	110
SEP							
14...	1120	3.0	694	7.20	21.0	8.1	92
20...	1050	3.0	582	6.40	17.0	8.9	92

GOOSE CREEK BASIN

03292480 LITTLE GOOSE CREEK NEAR HARRODS CREEK, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°18'45",long 85°37'33", Jefferson County, Hydrologic Unit 05140101, at culvert on U.S. Highway 42 and at mile 1.8

DRAINAGE AREA.--5.8 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT							
13...	0925	0.89	741	7.80	6.0	10.3	82
26...	1005	1.4	680	8.26	5.5	10.8	85
NOV							
09...	0930	1.9	701	8.20	6.0	11.3	90
23...	1020	7.3	586	8.70	5.0	11.7	91
DEC							
07...	0950	2.8	634	8.92	5.0	12.2	95
21...	0930	15	545	8.20	7.5	10.1	84
JAN							
11...	1000	10	494	8.10	6.5	11.9	97
25...	0930	5.1	507	8.65	8.5	11.0	94
FEB							
08...	1020	12	489	8.40	2.5	13.4	96
23...	1015	30	401	8.10	4.0	12.3	94
MAR							
08...	1000	23	435	8.39	5.0	12.7	98
22...	0935	22	448	8.01	7.0	12.6	101
APR							
05...	0915	59	361	7.23	10.0	11.0	96
21...	1015	6.5	355	7.90	12.0	10.9	99
MAY							
04...	0900	7.4	479	8.19	10.5	10.6	93
17...	1015	6.4	477	7.80	14.0	8.7	84
JUN							
01...	0950	3.3	513	7.43	21.5	7.5	83
14...	1000	4.6	516	7.85	20.0	8.4	91
28...	0945	1.6	550	8.00	22.5	10.6	121
JUL							
13...	1030	2.2	494	6.90	22.5	8.8	101
26...	1115	1.8	547	7.73	25.0	9.0	107
AUG							
09...	1030	1.2	474	7.70	17.5	8.7	89
23...	1020	1.9	497	7.81	23.0	8.9	103
SEP							
14...	1040	1.8	572	7.50	21.0	8.2	93
20...	1000	1.9	589	7.70	16.0	8.9	90

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY

LOCATION.--Lat 38°14'04", long 85°43'19", Jefferson County, Hydrologic Unit 05140101, on upstream side of right abutment of Trevilian Way Bridge at Louisville, 4.9 mi upstream from confluence with Middle Fork, and at mile 6.5.

DRAINAGE AREA.--17 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1939 to September 1940, August 1944 to September 1953 and October 1954 to September 1983 (High water records only, October 1962 to June 1970). June 1988 to current year. Monthly discharge only for October to December 1939, published in WSP 1305.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 445.60 ft Louisville city datum. Prior to Oct. 29, 1953, at datum 5.00 ft higher. Oct. 29, 1953, to June 24, 1970, at datum 3.00 ft. higher

REMARKS.--Estimated daily discharges: Feb. 7-10. Water-discharge records good.

AVERAGE DISCHARGE.--32 years, (Water years 1940, 1945-53, 1955-62, 1971-83, 1989), 22.0 ft^3/s, 17.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft^3/s, Mar. 9, 1964, gage height, 17.17 ft, present datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1943 reached a stage of 18.1 ft, present datum, from information furnished by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0400	660	8.31	Apr. 4	0230	*2,000	*15.02
Jan. 8	0100	548	7.56	May 9	1230	626	8.09
Feb. 14	0130	705	8.60	July 19	2000	1,870	14.47
Feb. 15	1330	593	7.87				

Minimum discharge, 0.86 ft^3/s, Nov. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	1.2	5.0	25	6.9	13	64	9.8	8.3	7.6	9.3	30
2	4.5	1.2	4.3	11	52	12	45	9.2	8.7	10	6.0	6.0
3	2.0	1.0	4.0	9.2	268	12	130	9.1	24	16	5.1	3.7
4	1.6	50	3.5	8.7	87	11	691	12	30	11	4.6	3.0
5	1.3	36	3.3	27	58	138	122	38	37	6.9	4.3	2.9
6	1.3	9.1	3.4	50	49	111	72	20	9.9	6.1	20	2.8
7	1.4	7.5	3.4	26	45	52	64	13	7.8	7.4	5.5	2.7
8	1.5	5.3	3.2	119	41	36	73	12	6.8	6.4	4.3	2.4
9	1.2	4.3	3.0	24	40	30	42	157	44	5.6	4.0	3.8
10	1.3	27	3.0	17	45	24	32	38	10	5.5	3.8	48
11	1.3	7.3	2.8	42	54	20	25	22	8.0	16	3.9	4.8
12	1.2	4.4	2.8	48	56	16	21	18	70	11	3.5	4.0
13	1.2	7.3	2.8	24	325	25	18	16	20	7.1	3.3	3.5
14	1.3	4.0	3.1	128	406	17	16	20	49	6.2	3.2	21
15	1.3	3.5	2.9	65	483	17	15	26	24	6.0	3.2	5.3
16	1.4	5.1	2.7	33	275	14	13	14	22	5.6	4.6	3.6
17	2.1	3.5	2.7	23	112	13	12	11	13	5.6	3.8	3.2
18	2.6	2.7	2.6	19	67	18	23	10	11	5.1	3.2	3.0
19	2.6	114	2.7	16	48	13	23	11	52	631	2.7	2.8
20	2.2	181	2.6	14	77	79	11	60	55	149	3.3	2.5
21	10	30	40	12	165	69	10	13	18	27	11	2.5
22	7.4	20	5.7	11	77	37	9.3	14	12	17	4.5	3.5
23	16	9.7	28	10	49	30	11	82	9.7	13	27	14
24	5.0	6.2	71	9.6	34	27	9.4	17	8.6	12	11	4.1
25	3.5	5.1	14	8.8	27	22	8.3	14	7.9	10	4.7	3.3
26	2.9	38	9.1	18	23	19	12	61	7.0	8.9	4.3	3.1
27	3.8	32	9.0	9.7	19	18	36	16	6.4	7.9	4.1	3.0
28	6.1	11	164	8.4	16	17	9.3	13	6.5	7.5	3.8	2.7
29	3.4	7.0	28	7.8	---	66	34	11	5.6	6.5	3.2	3.0
30	1.3	6.0	15	8.1	---	52	11	10	4.9	18	3.1	3.2
31	1.1	---	11	7.2	---	177	---	9.4	---	37	3.1	---
TOTAL	96.5	640.4	458.6	839.5	3004.9	1205	1662.3	786.5	597.1	1089.9	181.4	201.4
MEAN	3.11	21.3	14.8	27.1	107	38.9	55.4	25.4	19.9	35.2	5.85	6.71
MAX	16	181	164	128	483	177	691	157	70	631	27	48
MIN	1.1	1.0	2.6	7.2	6.9	11	8.3	9.1	4.9	5.1	2.7	2.4
CFSM	.18	1.24	.86	1.57	6.24	2.26	3.22	1.48	1.16	2.04	.34	.39
IN.	.21	1.39	.99	1.82	6.50	2.61	3.60	1.70	1.29	2.36	.39	.44

WTR YR 1989 TOTAL 10763.5 MEAN 29.5 MAX 691 MIN 1.0 CFSM 1.71 IN. 23.28

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1988 to current year.
pH: May 1988 to current year.
WATER TEMPERATURE: May 1988 to current year.
DISSOLVED OXYGEN: May 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1988.

REMARKS.--Water-quality samples were collected biweekly. Records good for specific conductance, pH, and water temperature. Records fair for dissolved oxygen.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 947 microsiemens, Oct. 5, 1988; minimum, 131 microsiemens, Feb. 13, 1989.
pH: Maximum, 9.5 units, Aug. 10, 1988; minimum, 6.1 units, June 20, 1988 and Mar. 1, 1989.
WATER TEMPERATURE: Maximum, 33.6°C, Aug. 17, 1988; minimum, 1.1°C, Feb. 9, 1989.
DISSOLVED OXYGEN: Maximum, 16.2 mg/L, Mar. 1, 1989; minimum, 2.3 mg/L, Aug. 4, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 947 microsiemens, Oct. 5; minimum, 131 microsiemens, Feb. 13.
pH: Maximum, 9.2 units, Dec. 19, 20; minimum, 6.1 units, Mar. 1.
WATER TEMPERATURE: Maximum, 31.6°C, July 11; minimum, 1.1°C, Feb. 9.
DISSOLVED OXYGEN: Maximum, 16.2 mg/L, Mar. 1; minimum, 2.7 mg/L, July 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
05...	0950	1.2	498	7.10	16.0	7.8	80
19...	1010	3.2	573	8.58	13.5	8.6	82
NOV							
02...	1000	1.2	633	8.09	10.0	9.5	84
16...	1030	5.9	603	7.60	14.0	9.1	90
DEC							
01...	1040	5.0	606	8.49	6.0	11.5	92
14...	0945	2.7	506	8.77	6.0	14.2	115
JAN							
05...	1055	7.5	580	7.30	5.0	12.5	99
19...	1025	15	567	7.90	7.0	10.9	90
FEB							
01...	1030	6.0	535	8.10	10.5	11.0	100
15...	1130	492	170	7.90	9.0	9.3	80
MAR							
01...	1000	13	532	7.92	3.5	12.0	89
15...	0950	15	563	7.43	9.0	9.8	85
29...	1045	129	387	7.80	17.0	7.6	79
APR							
12...	1010	21	524	7.50	8.5	9.9	84
26...	1015	7.7	503	7.44	21.0	7.7	85
MAY							
10...	1110	36	473	8.07	14.0	8.8	84
24...	1015	14	487	7.20	17.5	7.7	80
JUN							
07...	1000	8.1	475	7.75	21.5	7.7	86
22...	1100	11	484	7.30	24.0	8.4	99
JUL							
06...	1000	7.4	485	6.80	24.0	8.4	99
19...	1000	15	385	7.11	24.0	6.0	71
AUG							
02...	1010	6.0	476	7.70	25.0	6.1	74
16...	0953	2.8	433	7.60	25.0	8.2	100
30...	1010	2.6	462	7.48	25.5	8.0	97
SEP							
11...	1027	4.5	358	7.50	23.5	--	--
28...	1010	2.6	463	7.80	16.0	9.6	97

BEARGRASS CREEK BASIN

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	705	429	549	693	621	627	607	500	557	631	525	559
2	615	411	450	637	623	631	611	580	593	585	568	576
3	640	437	485	644	632	637	646	578	603	592	584	588
4	639	483	501	645	219	481	589	570	581	599	584	590
5	947	492	547	364	265	316	579	561	569	824	279	561
6	---	---	---	437	369	411	566	553	562	446	247	349
7	---	---	---	527	434	482	560	499	546	625	315	523
8	614	510	537	557	528	543	547	521	535	434	306	371
9	640	512	542	573	557	565	528	502	516	512	435	470
10	602	514	535	577	406	468	513	498	506	603	495	524
11	557	517	526	474	420	451	516	502	507	656	504	543
12	615	511	533	474	458	464	505	498	502	603	514	536
13	671	512	529	505	441	482	510	500	505	694	529	555
14	746	522	558	512	503	507	512	484	505	676	445	554
15	765	548	573	528	504	516	507	492	499	534	484	512
16	584	549	570	612	502	553	502	483	492	634	526	552
17	585	515	549	602	560	586	498	491	495	639	541	555
18	610	478	533	600	530	583	508	492	499	719	550	570
19	613	545	568	541	189	290	519	493	506	755	559	588
20	575	539	553	380	286	333	526	503	517	586	570	580
21	569	324	427	398	381	392	592	283	393	578	569	575
22	437	340	396	432	400	413	488	391	441	576	560	568
23	454	224	355	476	433	451	476	338	409	572	551	563
24	451	343	396	514	477	496	456	306	381	569	507	551
25	547	452	499	540	515	527	520	425	485	559	528	545
26	544	515	529	553	487	538	550	522	536	675	451	529
27	590	541	562	482	442	457	565	517	550	501	442	468
28	595	510	552	456	439	446	544	348	426	540	502	520
29	589	523	554	485	456	469	539	464	513	557	486	532
30	629	570	596	501	485	493	565	541	557	609	535	561
31	661	615	620	---	---	---	583	563	570	556	510	534
MONTH	---	---	---	693	189	487	646	283	511	824	247	536

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	539	512	529	534	409	479	353	317	337	525	461	488
2	547	171	462	534	519	528	361	351	355	503	485	494
3	430	153	282	549	517	531	359	325	342	510	485	499
4	470	435	455	559	527	542	419	161	326	506	410	477
5	469	449	459	660	317	399	512	420	465	431	214	374
6	456	434	451	455	332	401	548	512	529	408	226	331
7	442	427	438	474	457	464	547	519	534	465	410	441
8	435	420	431	493	474	484	550	516	535	506	437	461
9	432	413	423	510	492	503	551	516	530	498	208	328
10	422	407	414	521	511	517	554	538	549	516	306	421
11	420	394	409	536	517	526	561	545	553	513	491	503
12	400	387	394	536	531	534	562	523	541	513	495	505
13	530	131	263	618	523	549	531	510	522	515	486	496
14	275	139	211	552	534	545	524	500	513	513	223	480
15	268	134	169	569	503	537	528	503	515	428	305	366
16	282	177	230	553	502	523	518	491	505	473	392	419
17	333	277	313	546	506	525	522	480	496	477	424	458
18	355	333	345	642	511	547	543	327	444	474	423	454
19	368	354	361	523	492	507	473	318	404	470	168	456
20	379	240	343	546	256	408	492	438	468	378	184	269
21	291	231	247	449	284	380	507	476	489	453	381	422
22	348	293	326	460	397	442	511	476	493	469	350	435
23	500	349	411	415	384	404	522	457	488	389	188	283
24	495	398	432	403	384	396	539	451	498	499	383	458
25	410	395	400	394	370	387	520	472	497	517	474	499
26	410	405	408	390	369	382	521	310	503	512	168	305
27	410	405	407	397	376	387	388	241	326	460	335	422
28	420	398	410	408	387	400	432	391	439	470	448	459
29	---	---	---	406	304	363	520	234	342	472	445	464
30	---	---	---	343	297	319	536	401	466	496	438	456
31	---	---	---	337	273	294	---	---	---	457	388	437
MONTH	547	131	372	660	256	458	562	161	467	525	168	431

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	456	418	440	471	369	419	470	418	443	465	216	372
2	469	404	437	560	397	447	489	462	474	374	289	344
3	457	235	425	475	347	411	514	470	493	402	373	386
4	336	224	286	416	362	396	537	428	478	418	402	407
5	378	258	305	463	402	431	502	448	474	433	411	421
6	421	338	380	486	430	472	488	297	362	451	425	437
7	491	415	456	496	459	479	407	332	373	459	442	449
8	503	438	481	495	455	484	449	400	429	462	438	455
9	506	222	324	483	449	468	449	410	433	487	286	453
10	516	339	430	476	467	472	447	425	436	416	255	311
11	517	464	485	485	331	456	452	432	440	406	351	382
12	504	185	391	456	311	374	444	423	436	436	405	421
13	457	237	372	522	426	477	454	433	443	443	419	436
14	424	255	337	568	522	548	461	433	444	443	294	393
15	458	420	440	563	512	547	459	450	454	389	297	348
16	468	327	411	556	533	545	471	304	426	419	389	403
17	534	469	500	564	522	536	450	407	430	440	419	430
18	522	470	500	---	---	---	460	393	428	456	439	446
19	520	253	426	---	---	---	449	407	432	457	441	452
20	411	258	351	623	366	482	447	398	427	468	453	458
21	490	357	431	648	623	633	466	281	395	475	467	470
22	517	472	495	650	627	640	420	355	389	502	455	479
23	518	471	492	643	625	634	433	187	370	474	397	422
24	509	446	473	630	616	622	369	203	312	427	403	415
25	478	420	451	620	591	600	451	369	411	450	423	437
26	465	410	443	601	560	582	505	453	480	468	446	459
27	463	409	437	581	531	561	516	490	501	465	460	463
28	486	410	446	561	522	545	498	479	486	473	455	463
29	455	417	439	541	520	530	478	460	471	490	448	465
30	463	434	444	546	422	490	474	452	466	489	408	453
31	---	---	---	438	296	389	472	448	459	---	---	---
MONTH	534	185	424	---	---	---	537	187	435	502	216	424

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.4	7.0	7.2	8.3	8.0	8.2	8.7	8.1	8.4	7.6	7.1	7.3
2	7.4	7.2	7.3	8.3	7.8	8.0	8.7	8.6	8.7	7.4	7.2	7.3
3	7.6	7.1	7.3	8.1	7.9	8.0	8.7	8.5	8.7	7.4	7.3	7.3
4	7.6	7.2	7.3	8.0	7.4	7.8	8.7	8.5	8.7	7.5	7.2	7.4
5	7.7	7.0	7.3	7.7	7.4	7.5	8.7	8.5	8.7	7.4	6.9	7.3
6	---	---	---	7.9	7.7	7.8	8.7	8.5	8.7	7.1	6.7	6.9
7	---	---	---	7.9	7.8	7.9	8.8	8.7	8.7	7.5	7.1	7.2
8	8.0	7.3	7.6	7.9	7.8	7.9	8.8	8.7	8.8	7.3	6.8	7.0
9	8.1	7.4	7.7	7.9	7.8	7.9	8.8	8.6	8.7	7.5	7.3	7.4
10	8.3	7.5	7.8	7.8	7.3	7.5	8.8	8.7	8.8	7.7	7.4	7.5
11	8.3	7.6	7.8	7.7	7.4	7.6	8.8	8.6	8.8	7.7	7.2	7.5
12	8.3	7.7	8.0	7.7	7.6	7.7	8.8	8.7	8.8	7.4	7.2	7.3
13	8.4	7.9	8.1	7.8	7.7	7.7	8.9	8.7	8.8	7.8	7.4	7.6
14	8.6	8.1	8.3	7.8	7.4	7.5	8.8	8.7	8.8	7.7	7.2	7.5
15	8.7	8.2	8.4	7.5	7.5	7.5	8.8	8.6	8.7	7.7	7.3	7.6
16	8.6	8.2	8.4	7.6	7.4	7.5	8.8	8.5	8.7	7.8	7.7	7.8
17	8.6	8.2	8.3	7.7	7.5	7.5	8.7	8.3	8.6	8.0	7.7	7.9
18	8.3	8.1	8.2	7.7	7.6	7.7	8.6	8.4	8.5	8.1	7.8	7.9
19	8.8	8.3	8.5	7.8	7.2	7.4	9.2	8.5	9.0	9.0	7.9	8.1
20	9.1	8.6	8.8	7.5	7.1	7.3	9.2	8.8	9.1	8.2	8.1	8.2
21	8.7	8.4	8.6	7.7	7.5	7.6	8.8	7.7	8.1	8.3	8.0	8.2
22	8.6	8.4	8.5	7.9	7.7	7.8	8.0	7.9	8.0	8.3	8.0	8.2
23	8.6	8.4	8.5	7.9	7.8	7.9	8.1	7.6	7.8	8.3	8.0	8.2
24	8.6	8.5	8.5	7.9	7.9	7.9	7.9	7.5	7.6	8.3	8.1	8.2
25	8.7	8.6	8.6	8.0	7.9	8.0	7.9	7.7	7.8	8.2	8.1	8.1
26	8.7	8.5	8.6	8.0	7.4	7.9	8.0	7.8	7.9	8.1	7.8	8.0
27	8.7	8.5	8.6	7.7	7.4	7.6	8.0	7.7	7.9	8.1	7.8	7.9
28	8.5	8.4	8.5	8.0	7.7	7.9	7.8	7.0	7.3	8.2	8.1	8.1
29	8.5	8.4	8.4	8.1	8.0	8.1	7.6	7.4	7.5	8.1	8.0	8.1
30	8.6	8.3	8.4	8.2	8.1	8.2	7.6	7.5	7.6	8.1	7.9	8.0
31	8.4	8.1	8.3	---	---	---	7.6	7.4	7.5	8.3	8.0	8.1
MONTH	---	---	---	8.3	7.1	7.8	9.2	7.0	8.4	9.0	6.7	7.7

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	7.9	8.2	8.2	6.1	7.3	7.8	7.6	7.7	7.6	7.4	7.6
2	8.4	7.7	8.1	8.3	8.0	8.1	8.1	7.7	7.9	7.7	7.6	7.7
3	7.8	7.5	7.7	8.3	7.9	8.1	8.0	7.6	7.8	7.8	7.7	7.7
4	8.1	7.8	8.0	8.3	7.9	8.1	7.7	7.4	7.6	7.9	7.7	7.7
5	8.2	8.0	8.2	8.1	7.4	7.6	7.9	7.6	7.8	7.9	7.4	7.6
6	8.4	8.2	8.3	7.6	7.4	7.5	7.9	7.6	7.8	7.8	7.5	7.6
7	8.5	8.3	8.4	7.9	7.6	7.7	7.7	7.5	7.6	8.0	7.8	7.9
8	8.7	8.4	8.5	8.0	7.7	7.8	7.6	7.4	7.5	8.1	8.0	8.0
9	8.7	8.5	8.6	8.1	7.7	7.9	7.7	7.5	7.6	8.2	7.6	7.9
10	8.8	8.6	8.7	8.2	7.7	7.9	7.7	7.5	7.6	8.2	7.8	8.0
11	8.8	8.6	8.7	8.1	7.6	7.8	7.7	7.5	7.6	8.3	8.0	8.1
12	8.8	8.6	8.7	8.2	7.6	7.9	7.9	7.5	7.7	8.2	8.0	8.1
13	8.8	7.9	8.3	8.0	7.6	7.8	8.1	7.5	7.8	8.2	7.9	8.1
14	8.2	7.9	8.1	7.9	7.4	7.6	8.2	7.5	7.8	8.2	7.8	8.0
15	8.2	7.9	8.0	8.1	7.4	7.7	8.1	7.5	7.8	7.9	7.5	7.7
16	8.0	7.9	8.0	8.2	7.7	8.0	8.2	7.7	8.0	7.9	7.6	7.7
17	8.1	7.9	8.0	8.2	7.8	8.0	8.2	7.7	8.0	7.9	7.6	7.7
18	8.0	7.8	7.9	8.1	7.7	7.8	8.1	7.5	7.8	7.8	7.6	7.7
19	7.8	7.6	7.7	8.3	7.8	8.0	8.1	7.3	7.7	7.7	7.5	7.6
20	7.7	7.1	7.5	8.2	7.5	7.9	8.0	7.6	7.8	7.6	7.2	7.3
21	7.1	6.9	7.0	7.9	7.5	7.7	7.9	7.6	7.8	7.6	7.4	7.5
22	7.2	7.0	7.1	8.4	7.7	8.0	7.8	7.5	7.7	7.6	7.3	7.4
23	7.3	7.1	7.2	8.4	7.9	8.2	7.7	7.5	7.7	7.4	6.9	7.1
24	7.1	6.8	7.0	8.4	7.9	8.1	7.7	7.5	7.6	---	---	---
25	6.9	6.6	6.8	8.5	7.9	8.2	7.7	7.5	7.6	---	---	---
26	6.6	6.4	6.6	8.4	7.9	8.2	7.6	7.4	7.5	---	---	---
27	6.5	6.3	6.4	8.2	7.9	8.1	7.3	7.0	7.1	---	---	---
28	6.3	6.2	6.3	8.2	7.9	8.1	7.4	7.1	7.3	---	---	---
29	---	---	---	8.1	7.5	7.8	7.6	7.2	7.3	---	---	---
30	---	---	---	7.9	7.5	7.7	7.6	7.3	7.5	---	---	---
31	---	---	---	7.8	7.3	7.5	---	---	---	---	---	---
MONTH	8.8	6.2	7.8	8.5	6.1	7.9	8.2	7.0	7.7	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	7.2	6.9	7.0	7.8	7.6	7.7	7.8	6.9	7.2
2	---	---	---	6.9	6.7	6.8	8.0	7.7	7.8	7.3	6.9	7.1
3	---	---	---	7.0	6.7	6.8	8.0	7.8	7.9	7.5	7.2	7.3
4	---	---	---	6.9	6.7	6.8	8.0	7.8	7.9	7.6	7.3	7.4
5	---	---	---	6.9	6.8	6.8	8.0	7.8	7.9	7.8	7.3	7.5
6	---	---	---	7.1	6.8	6.9	8.0	7.5	7.7	7.7	7.3	7.5
7	---	---	---	7.2	6.8	7.0	8.2	7.7	7.9	7.9	7.3	7.6
8	8.1	7.8	8.0	7.2	6.9	7.0	8.2	7.9	8.0	8.0	7.3	7.6
9	8.0	7.4	7.6	7.3	6.9	7.1	8.2	7.9	8.1	8.0	7.3	7.5
10	8.0	7.7	7.8	7.4	6.9	7.2	8.3	7.9	8.1	7.6	7.1	7.3
11	8.0	7.8	7.9	7.5	6.8	7.2	8.4	7.8	8.1	7.4	7.3	7.3
12	7.9	7.3	7.7	7.1	6.6	6.8	8.4	7.9	8.2	7.6	7.4	7.5
13	7.8	7.3	7.5	7.3	6.8	7.0	8.3	7.9	8.1	7.7	7.5	7.6
14	7.8	7.2	7.5	7.6	7.0	7.2	8.3	7.8	8.1	7.6	7.2	7.4
15	7.9	7.4	7.6	7.7	7.0	7.4	8.2	7.7	8.0	7.4	7.2	7.3
16	7.9	7.4	7.6	7.8	7.2	7.5	8.6	7.6	8.0	7.5	7.3	7.4
17	7.9	7.5	7.8	---	---	---	8.2	7.5	7.8	7.6	7.4	7.5
18	7.9	7.5	7.7	---	---	---	8.4	7.7	8.0	7.8	7.5	7.6
19	7.8	7.1	7.6	---	---	---	8.5	7.7	8.1	8.0	7.4	7.6
20	7.4	7.0	7.2	6.9	6.3	6.6	8.2	7.8	8.0	8.0	7.4	7.6
21	7.5	7.0	7.2	7.3	6.8	7.1	7.9	7.4	7.6	8.2	7.4	7.7
22	7.6	7.3	7.4	7.5	7.2	7.4	8.1	7.4	7.7	7.9	7.4	7.6
23	7.5	7.3	7.4	7.6	7.5	7.5	8.0	7.4	7.7	7.7	7.2	7.5
24	7.5	7.3	7.4	7.8	7.5	7.6	7.6	7.3	7.4	7.9	7.5	7.6
25	7.6	7.3	7.4	7.8	7.6	7.7	7.6	7.4	7.5	8.0	7.7	7.8
26	7.5	7.1	7.3	7.9	7.5	7.7	7.9	7.5	7.7	8.1	7.7	7.8
27	7.5	7.1	7.3	7.9	7.5	7.7	7.9	7.6	7.7	8.1	7.7	7.8
28	7.3	7.0	7.2	7.8	7.5	7.6	7.9	7.6	7.7	8.0	7.4	7.7
29	7.3	7.0	7.1	7.8	7.5	7.6	7.9	7.4	7.7	7.8	7.4	7.5
30	7.1	7.0	7.1	7.8	7.5	7.6	7.8	7.4	7.6	7.8	7.3	7.5
31	---	---	---	7.9	7.4	7.6	7.8	7.3	7.5	---	---	---
MONTH	---	---	---	---	---	---	8.6	7.3	7.8	8.2	6.9	7.5

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.3	20.8	21.5	14.0	10.3	11.9	7.2	5.1	5.8	7.7	5.9	7.0
2	22.6	19.8	21.0	12.4	9.8	10.9	6.1	3.6	4.6	7.2	6.5	6.7
3	22.0	18.5	19.9	11.9	8.9	10.4	6.9	3.9	5.1	6.9	5.9	6.6
4	20.2	17.0	18.3	13.8	10.7	12.5	7.1	4.5	5.5	5.9	4.5	5.3
5	18.8	15.5	17.0	12.6	10.3	11.7	6.7	4.0	5.1	5.6	4.3	4.9
6	---	---	---	10.2	7.2	8.6	7.2	4.1	5.3	9.3	5.5	7.5
7	---	---	---	9.8	6.7	8.1	7.7	5.3	6.6	13.7	8.2	9.6
8	19.8	14.8	16.8	12.6	9.4	10.5	7.3	6.2	6.6	13.8	7.5	10.1
9	17.6	14.6	16.2	12.0	9.1	10.7	7.0	4.7	5.9	7.4	6.1	6.9
10	18.2	14.6	16.2	14.7	12.1	13.5	5.9	4.2	4.9	7.5	5.3	6.5
11	19.0	14.9	16.5	12.5	9.1	10.4	5.4	2.9	4.0	8.4	6.5	7.3
12	16.8	13.4	14.9	10.2	8.4	9.3	5.3	2.6	3.7	11.1	8.5	10.2
13	17.1	12.3	14.3	11.9	9.2	10.4	5.5	3.8	4.5	9.3	6.9	8.0
14	18.0	12.5	14.7	13.1	9.1	10.7	6.8	4.0	5.1	7.7	4.8	6.2
15	18.5	13.7	15.7	13.6	10.2	11.9	6.2	4.2	5.1	9.0	7.5	8.5
16	15.8	14.6	15.1	15.1	12.2	13.8	5.2	3.3	4.2	9.4	7.5	8.5
17	17.6	14.2	15.9	12.3	9.3	10.8	5.0	3.6	4.0	9.2	6.4	7.8
18	17.3	15.3	16.6	11.0	8.2	9.6	4.8	3.1	3.9	9.3	7.1	8.3
19	15.4	13.6	14.4	11.6	7.7	9.6	6.7	3.2	4.8	9.0	4.6	7.8
20	15.1	12.4	13.7	13.4	10.6	12.2	7.1	5.1	6.1	8.5	5.7	7.0
21	13.9	10.8	12.1	10.5	8.7	9.9	9.6	6.7	8.5	5.8	4.2	5.1
22	13.3	10.3	11.5	9.6	7.2	8.6	7.7	6.3	7.0	6.5	4.6	5.5
23	11.6	8.2	10.1	9.2	6.7	8.0	10.7	8.0	9.6	7.1	5.4	6.3
24	12.9	8.8	10.4	9.5	6.6	7.8	11.7	8.2	10.3	8.7	6.9	7.9
25	13.8	9.8	11.3	9.8	6.9	8.5	9.9	6.7	7.8	11.7	8.6	10.2
26	13.0	9.0	10.6	12.8	9.3	10.6	6.7	5.4	6.0	12.1	10.1	11.5
27	14.0	9.0	11.3	12.6	9.8	11.6	9.6	5.7	7.2	10.0	7.6	8.7
28	13.7	10.6	12.2	9.7	5.8	7.7	9.7	6.0	7.5	9.6	7.2	8.3
29	12.7	9.5	10.8	6.8	4.7	5.7	7.2	4.9	6.0	10.3	8.8	9.7
30	12.9	10.2	11.3	7.0	5.6	6.3	7.3	5.8	6.6	11.1	9.7	10.4
31	13.5	9.2	11.0	---	---	---	7.1	5.6	6.4	11.4	8.4	9.9
MONTH	---	---	---	15.1	4.7	10.1	11.7	2.6	5.9	13.8	4.2	7.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	10.9	9.8	10.4	7.2	3.5	5.3	15.8	8.8	11.9	19.8	16.8	18.5
2	10.4	8.2	9.8	6.5	4.2	5.5	14.4	10.7	12.4	16.8	14.9	16.0
3	8.1	6.2	7.1	10.2	6.4	8.3	16.1	12.1	13.8	18.7	13.2	15.7
4	8.9	7.5	8.2	12.8	10.0	11.3	14.9	12.8	14.0	17.4	14.9	16.3
5	8.3	6.9	7.6	12.7	5.0	8.6	14.0	11.5	12.7	17.9	15.4	16.3
6	7.0	3.4	5.5	6.9	4.5	5.9	14.9	10.0	12.2	16.2	13.2	14.3
7	5.9	3.0	4.6	7.0	4.5	5.7	15.1	10.1	12.4	16.3	11.3	13.7
8	5.6	3.3	4.6	8.9	3.9	6.3	12.5	9.4	10.6	18.2	13.4	15.7
9	4.1	1.1	2.5	10.9	5.1	7.8	13.0	8.3	10.4	17.1	14.0	15.5
10	4.5	1.7	3.2	10.1	6.0	8.2	13.4	8.2	10.8	18.7	12.5	15.3
11	7.3	4.3	5.8	12.4	6.6	9.5	14.5	7.3	11.0	16.9	12.3	14.9
12	7.6	5.2	6.6	12.3	9.0	10.4	15.0	8.3	12.0	15.9	12.4	14.6
13	8.1	4.4	6.5	11.0	7.8	9.7	15.9	10.8	13.6	15.6	13.5	14.1
14	10.9	8.2	9.9	13.3	9.1	11.1	15.5	11.3	13.2	17.3	13.0	14.8
15	10.0	7.3	8.9	13.5	9.2	11.4	14.2	12.3	13.3	17.7	14.6	16.3
16	11.9	9.2	10.5	10.9	6.7	9.1	17.2	11.7	14.5	19.7	14.1	17.0
17	10.8	9.2	10.0	13.0	8.8	10.9	18.1	14.9	16.7	20.9	16.9	18.8
18	12.3	8.2	10.0	13.8	8.2	11.6	19.4	15.1	17.6	19.5	17.9	18.6
19	12.1	8.3	10.0	10.1	5.9	8.2	18.5	13.3	16.2	18.8	17.6	18.1
20	10.0	8.8	9.3	9.4	7.0	8.4	18.8	14.5	16.8	22.4	16.6	19.2
21	9.9	9.2	9.7	9.0	7.4	8.1	20.4	15.8	18.0	23.5	18.6	21.4
22	9.1	7.1	8.4	12.3	5.6	8.8	20.1	17.6	18.9	21.7	17.6	19.8
23	8.0	4.2	6.3	12.1	6.8	9.6	18.7	15.1	16.9	21.5	15.8	18.3
24	8.3	2.9	5.6	16.2	9.8	12.9	19.2	14.3	16.5	22.6	16.7	20.1
25	9.8	4.3	6.9	15.6	11.3	13.9	24.0	17.8	20.5	22.5	19.9	20.8
26	9.5	7.2	8.4	17.3	12.9	15.5	25.8	20.8	23.1	23.8	20.2	21.6
27	8.2	5.1	6.5	17.1	14.6	16.1	24.4	19.4	21.7	23.4	18.6	21.5
28	7.5	4.1	6.2	19.1	15.5	17.4	24.9	21.8	23.3	22.3	18.3	20.7
29	---	---	---	16.7	16.4	17.6	23.6	19.4	21.8	24.1	20.1	21.9
30	---	---	---	16.2	13.9	15.1	22.9	19.7	21.2	26.8	21.2	23.9
31	---	---	---	13.6	9.8	10.8	---	---	---	27.4	22.9	25.0
MONTH	12.3	1.1	7.5	19.1	3.5	10.3	25.8	7.3	15.6	27.4	11.3	18.0

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.4	23.8	26.0	26.8	25.1	26.0	27.6	24.6	25.9	25.7	22.3	24.2
2	27.1	24.0	25.7	25.3	21.8	23.7	28.7	24.9	26.7	26.5	22.0	23.7
3	26.8	23.2	24.8	24.3	21.1	22.5	28.9	25.5	27.2	26.3	22.3	24.0
4	24.7	21.2	23.0	24.6	22.5	23.7	30.3	26.0	28.0	25.5	21.7	23.4
5	23.9	20.2	21.2	26.5	23.6	24.9	30.5	26.7	28.5	25.8	22.8	24.1
6	23.8	18.8	21.1	28.6	23.9	26.0	28.2	23.9	25.6	26.8	22.7	24.5
7	26.1	20.9	23.2	30.3	25.6	27.7	26.1	22.5	24.2	26.7	23.4	24.9
8	24.5	21.9	23.4	30.1	26.1	27.9	26.1	21.5	23.6	27.7	23.5	25.2
9	25.3	19.9	22.7	30.4	26.2	28.1	26.5	21.6	23.8	27.8	23.8	25.5
10	24.9	20.7	23.1	31.5	26.7	28.8	27.1	22.3	24.5	25.3	22.3	23.5
11	26.2	21.3	23.5	31.6	26.3	28.9	26.9	22.9	24.8	24.6	22.7	23.6
12	24.7	21.6	23.4	29.1	25.6	27.1	27.2	23.2	25.1	25.5	22.2	23.6
13	24.1	20.4	22.0	28.3	26.4	27.2	27.2	23.3	25.2	25.9	22.2	23.8
14	23.7	20.7	21.9	29.0	24.8	26.7	27.8	23.7	25.5	23.8	21.0	22.8
15	22.2	19.3	20.8	27.5	24.6	26.2	27.7	24.4	25.8	21.1	19.9	20.5
16	21.6	18.9	20.0	29.5	23.9	26.5	27.0	24.7	25.9	21.7	19.5	20.3
17	23.1	17.9	20.5	---	---	---	26.0	24.4	25.3	23.3	20.0	21.3
18	24.8	21.9	23.2	---	---	---	26.3	24.0	24.9	23.6	19.8	21.3
19	24.9	23.1	24.0	---	---	---	26.6	22.4	24.6	23.7	19.9	21.4
20	25.9	21.2	23.4	23.8	21.5	22.4	25.6	23.7	24.4	23.3	19.8	21.4
21	25.0	21.9	23.6	26.9	20.9	23.5	24.5	23.0	23.9	24.5	21.1	22.5
22	26.4	23.5	25.0	27.0	22.9	25.5	28.5	23.5	25.5	23.2	21.5	22.4
23	28.1	24.5	26.1	28.9	25.8	27.2	28.4	24.2	26.2	21.6	17.3	19.1
24	28.5	24.8	26.6	29.9	26.9	28.1	25.8	23.2	24.4	18.9	15.0	16.9
25	29.7	25.1	27.2	31.0	27.0	28.7	26.3	24.6	25.4	17.7	16.5	17.2
26	30.1	25.8	27.9	31.0	27.1	28.9	27.9	25.1	25.2	20.0	16.5	17.9
27	29.2	26.9	27.8	30.3	26.9	28.6	28.5	25.3	26.7	20.0	16.3	17.7
28	28.0	25.6	26.8	29.8	26.7	28.3	29.3	25.5	27.1	19.3	16.0	17.4
29	29.2	24.6	26.6	29.6	25.6	27.5	28.5	25.9	27.2	19.0	17.7	18.2
30	29.6	23.8	26.6	27.8	24.2	25.7	28.6	25.5	26.7	19.5	17.8	18.8
31	---	---	---	26.5	24.1	25.2	28.1	24.5	25.9	---	---	---
MONTH	30.1	17.9	24.0	---	---	---	30.5	21.5	25.6	27.8	15.0	21.7

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.0	5.4	6.7	11.6	8.9	9.8	11.7	9.4	10.7	11.8	10.5	11.1
2	15.8	5.2	8.0	10.8	8.6	9.5	11.9	11.1	11.5	11.7	10.7	11.3
3	---	---	---	10.2	8.4	9.2	11.8	11.4	11.6	12.1	10.8	11.4
4	---	---	---	8.9	6.6	8.0	11.9	11.4	11.6	13.4	11.6	12.4
5	---	---	---	8.4	7.6	8.0	12.7	11.7	12.0	12.6	10.8	12.4
6	---	---	---	9.6	8.4	9.0	12.6	12.0	12.3	11.0	10.4	10.6
7	---	---	---	10.1	9.4	9.8	12.7	11.7	12.3	11.2	9.1	10.6
8	11.8	7.7	9.3	9.4	9.0	9.2	13.0	11.9	12.3	10.8	8.6	9.9
9	11.4	7.7	9.2	9.4	8.9	9.2	12.9	12.2	12.6	11.8	10.7	11.4
10	12.0	7.9	9.4	9.1	7.8	8.3	13.4	12.6	12.9	12.1	11.2	11.7
11	11.6	7.9	9.2	9.5	8.3	9.0	14.0	13.1	13.5	12.6	11.3	11.7
12	11.8	8.1	9.6	10.0	9.4	9.7	14.4	13.7	14.0	12.9	11.6	12.1
13	12.1	8.4	9.9	10.2	9.6	9.8	14.6	13.8	14.1	---	---	---
14	13.3	9.6	11.1	9.6	8.9	9.3	14.2	13.0	13.8	---	---	---
15	13.7	9.6	11.1	9.7	9.0	9.4	14.0	13.4	13.6	---	---	---
16	12.4	9.7	10.7	9.3	8.5	8.9	13.8	13.0	13.3	---	---	---
17	12.8	9.5	10.6	9.5	8.0	8.8	13.9	13.3	13.5	---	---	---
18	11.0	8.6	9.5	10.0	9.2	9.7	14.1	13.4	13.7	---	---	---
19	10.5	7.7	9.2	11.0	9.3	9.9	14.1	12.6	13.3	---	---	---
20	11.6	7.7	9.2	9.6	8.7	9.0	12.6	12.1	12.3	11.1	9.5	10.2
21	9.8	8.1	8.7	10.0	9.4	9.7	12.6	9.4	10.4	12.2	11.0	11.6
22	9.3	7.8	8.5	10.9	9.7	10.2	10.7	10.2	10.5	12.5	11.2	11.9
23	10.9	8.0	9.0	10.4	9.7	10.1	10.4	9.1	9.7	---	---	---
24	9.6	8.7	9.0	10.0	9.7	9.9	10.3	9.2	9.6	---	---	---
25	10.0	8.7	9.2	9.9	9.4	9.6	11.4	9.5	10.6	---	---	---
26	10.4	8.7	9.4	9.4	7.8	8.8	12.0	10.9	11.4	---	---	---
27	10.8	8.6	9.6	8.6	7.8	8.2	12.0	10.5	11.5	---	---	---
28	9.7	8.5	9.0	9.9	8.5	9.3	10.9	9.7	10.5	---	---	---
29	9.8	8.1	8.9	10.4	10.0	10.2	12.0	10.6	11.4	---	---	---
30	11.3	8.3	9.6	9.9	9.7	9.8	11.9	10.8	11.4	---	---	---
31	11.8	9.0	10.1	---	---	---	12.1	10.8	11.5	---	---	---
MONTH	---	---	---	11.6	6.6	9.3	14.6	9.1	12.0	---	---	---

03292500 SOUTH FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	16.2	12.0	13.7	12.1	8.7	10.5	7.7	6.4	7.0
2	9.2	3.9	6.6	---	---	---	12.4	8.4	10.2	9.1	7.5	8.2
3	3.9	3.2	3.5	---	---	---	11.9	8.4	9.7	10.3	8.4	9.2
4	3.9	3.3	3.6	---	---	---	13.1	9.0	9.4	9.3	7.8	8.4
5	4.3	3.7	3.9	---	---	---	9.9	8.6	9.4	8.2	6.4	7.0
6	4.5	3.9	4.2	---	---	---	10.2	8.5	9.3	9.1	7.1	8.0
7	5.1	4.4	4.7	---	---	---	9.8	7.8	9.0	10.5	9.0	9.6
8	5.6	5.0	5.3	---	---	---	9.1	7.6	8.3	10.3	8.3	9.3
9	6.1	5.5	5.8	---	---	---	10.4	8.2	9.2	9.0	6.9	7.7
10	6.9	6.0	6.4	15.2	9.9	12.2	10.8	7.6	9.4	9.6	7.4	8.5
11	7.5	6.7	7.1	---	---	---	11.5	8.2	9.9	9.9	7.3	8.6
12	8.1	7.3	7.7	---	---	---	12.0	8.5	10.0	10.5	7.8	9.1
13	8.5	7.9	8.2	---	---	---	12.8	7.9	10.1	10.5	8.0	9.1
14	9.2	8.4	8.9	---	---	---	13.6	8.0	10.6	11.2	7.9	9.3
15	9.4	9.1	9.2	---	---	---	13.6	7.9	10.4	9.3	6.4	7.9
16	9.7	9.3	9.5	15.1	10.5	12.6	14.8	8.5	11.7	11.1	6.9	8.9
17	9.8	9.5	9.7	15.2	10.0	12.4	14.1	7.6	11.0	12.1	6.7	9.3
18	10.1	9.7	9.9	12.0	8.2	9.9	11.5	7.2	8.8	9.9	7.1	8.6
19	10.4	9.9	10.1	14.8	10.6	12.4	12.5	7.0	9.6	9.8	7.1	8.1
20	10.5	10.1	10.3	12.9	9.9	10.8	13.1	8.0	10.5	8.0	6.1	7.0
21	10.7	10.4	10.6	12.1	9.9	10.8	12.8	8.1	10.3	9.4	6.2	7.6
22	11.7	10.5	10.8	14.1	10.1	11.8	11.8	7.9	9.9	8.0	6.3	7.1
23	11.1	10.7	10.9	14.6	9.6	11.9	10.0	7.7	8.9	9.1	6.6	7.7
24	11.3	10.8	11.1	15.2	8.8	11.7	12.1	8.3	10.0	8.0	6.8	7.5
25	11.7	11.1	11.4	15.8	8.3	11.6	12.3	8.2	10.1	6.9	5.5	6.1
26	13.1	11.5	12.0	15.8	8.1	11.9	11.5	7.1	9.1	6.5	5.1	5.6
27	12.3	11.9	12.0	13.3	7.8	10.6	7.2	5.4	5.9	7.4	5.7	6.5
28	12.3	11.9	12.1	13.7	7.7	10.5	7.2	5.5	6.2	8.2	6.3	7.1
29	---	---	---	9.8	7.0	8.2	6.5	4.9	6.1	8.6	6.3	7.3
30	---	---	---	10.8	7.7	9.2	7.7	5.8	6.6	8.9	6.0	7.3
31	---	---	---	9.9	9.3	9.7	---	---	---	9.2	5.8	7.3
MONTH	---	---	---	---	---	---	14.8	4.9	9.3	12.1	5.1	7.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.5	5.6	7.3	9.2	7.1	8.2	---	---	---	7.3	4.4	5.5
2	9.0	5.3	6.9	8.2	5.7	6.9	---	---	---	6.0	4.2	4.9
3	9.8	5.2	7.2	9.3	7.3	8.0	---	---	---	6.8	4.7	5.5
4	6.8	5.3	6.1	9.0	7.3	8.1	---	---	---	8.3	5.4	6.4
5	7.0	5.4	6.5	9.2	8.1	8.5	---	---	---	8.9	5.5	6.6
6	9.2	6.9	7.8	9.7	8.0	8.6	---	---	---	9.1	5.5	6.8
7	9.7	7.1	8.2	9.5	6.8	8.1	---	---	---	9.3	5.2	6.9
8	9.5	7.0	8.1	9.4	6.2	7.6	---	---	---	9.7	5.1	6.7
9	8.0	6.1	7.2	9.2	5.6	7.3	---	---	---	9.8	5.0	6.7
10	9.5	7.1	8.1	9.0	5.4	7.1	---	---	---	6.5	4.7	5.5
11	9.7	7.6	8.5	8.4	3.1	6.1	---	---	---	6.2	5.2	5.7
12	8.7	6.4	7.6	5.7	2.7	3.6	---	---	---	7.3	5.9	6.3
13	8.8	7.1	7.8	6.3	3.0	4.4	---	---	---	8.6	6.2	7.1
14	8.6	7.0	7.8	8.3	4.1	5.9	---	---	---	7.6	5.9	6.5
15	9.8	7.6	8.6	9.2	5.3	7.1	---	---	---	6.5	5.9	6.1
16	10.0	7.5	8.6	9.6	5.8	7.5	---	---	---	7.3	6.1	6.6
17	10.7	8.7	9.8	---	---	---	---	---	---	8.5	6.6	7.3
18	10.8	8.2	9.4	---	---	---	---	---	---	9.1	6.7	7.6
19	9.7	7.6	8.6	---	---	---	---	---	---	10.1	6.7	7.9
20	9.3	7.1	7.9	---	---	---	---	---	---	10.7	6.7	8.0
21	9.7	7.3	8.4	---	---	---	---	---	---	10.6	6.8	8.1
22	9.9	8.0	8.9	---	---	---	---	---	---	10.3	6.7	7.7
23	10.6	7.5	8.8	---	---	---	---	---	---	8.2	5.8	7.2
24	10.8	7.7	9.0	---	---	---	---	---	---	9.7	7.5	8.2
25	11.4	7.7	9.3	---	---	---	---	---	---	9.9	7.9	8.8
26	11.4	7.4	9.3	---	---	---	---	---	---	11.2	7.9	9.1
27	11.5	7.3	9.0	---	---	---	---	---	---	11.7	8.1	9.5
28	10.9	7.0	8.7	---	---	---	---	---	---	11.7	7.8	9.4
29	11.4	7.3	9.0	---	---	---	---	---	---	11.2	7.8	8.9
30	11.1	7.4	9.0	---	---	---	---	---	---	10.2	7.0	8.5
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	11.5	5.2	8.2	---	---	---	---	---	---	11.7	4.2	7.2

03292550 SOUTH FORK BEARGRASS CREEK AT WINTER AVENUE AT LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°14'04", long 85°43'50", Jefferson County, Hydrologic Unit 05140101, at bridge on Winter Avenue, 1.4 mi above Middle Fork Beargrass Creek, and at mile 3.3

DRAINAGE AREA.--22.6 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT							
05...	0900	2.2	483	7.50	13.0	5.8	56
19...	0900	3.2	571	7.63	12.5	5.8	54
NOV							
02...	0900	2.0	639	7.64	7.5	8.6	72
16...	0936	3.9	616	8.10	14.5	6.3	63
DEC							
01...	0915	6.8	415	8.19	4.0	11.4	86
14...	0900	3.4	496	8.26	5.5	12.3	97
JAN							
05...	1015	10	623	8.00	4.0	12.2	94
19...	0910	19	596	8.00	7.0	10.6	88
FEB							
01...	0910	7.3	584	7.53	10.0	10.8	96
15...	0915	901	149	6.40	8.0	9.9	83
MAR							
01...	0850	18	573	7.67	4.0	13.0	98
15...	0900	23	515	7.65	11.5	10.1	93
29...	0905	20	550	7.60	17.0	7.9	82
APR							
12...	0925	26	547	7.70	10.5	9.9	88
26...	0910	9.5	536	7.17	19.5	7.7	83
MAY							
10...	0950	41	432	6.60	13.0	8.2	77
24...	0859	19	441	7.20	19.5	7.6	81
JUN							
07...	0900	9.9	439	7.53	20.0	6.4	69
22...	0920	3.4	622	7.40	23.5	10.6	125
JUL							
06...	0900	7.3	459	6.90	23.0	6.7	78
19...	0925	29	387	7.51	24.0	6.6	78
AUG							
02...	0910	7.7	441	7.60	24.5	6.1	73
16...	0900	3.6	494	7.40	23.0	6.2	73
30...	0920	3.8	533	7.62	24.5	6.0	71
SEP							
11...	0915	6.9	278	7.40	22.5	5.3	61
28...	0900	3.8	494	8.00	13.0	6.9	65

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY

LOCATION.--Lat 38°14'14", long 85°39'53", Jefferson County, Hydrologic Unit 05140101, on right bank 75 ft downstream from bridge on old Cannons Lane at Louisville, 1.7 mi downstream from Weicher Creek, 5.4 mi upstream from confluence with South Fork, 7.0 mi upstream from Ohio River, and at mile 5.4.

DRAINAGE AREA.--18.9 mi^2, of which about 0.5 mi^2 does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1944 to current year.

REVISED RECORDS.--WSP 1625: 1945(M), 1948(M), 1950(P), 1951-52(M), 1954-55(M), 1957(M), drainage area. WRD KY 72-1: 1950(M).

GAGE.--Water-stage recorder. Datum of gage is 476.70 ft, Louisville city datum. Prior to Mar. 12, 1968, water-stage recorder at same site at datum 1.00 ft higher. Mar. 12, 1968 to July 26, 1971, water-stage recorder at site 1,000 ft upstream at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Feb. 20 to Mar. 2 and June 10-23. Water-discharge records are good except those for estimated daily discharges which are poor.

AVERAGE DISCHARGE.--45 years, 25.4 ft^3/s, 18.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft^3/s, Apr. 2, 1970, gage height, 8.3 ft, from floodmark, at present site and datum; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1943 reached a stage of 9.1 ft, present site and datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0515	682	4.82	May 9	1330	666	4.73
Feb. 14	0300	914	5.48	July 19	1815	1,350	6.45
Apr. 4	0330	*1,730	*7.01				

Minimum daily discharge, 0.26 ft^3/s, Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	.26	7.8	32	6.7	15	75	21	6.6	1.6	9.8	26
2	3.8	.44	6.0	18	44	14	55	17	6.7	4.0	5.3	8.3
3	1.7	.58	5.1	15	290	13	134	15	6.0	18	3.7	3.6
4	1.1	27	4.1	12	91	12	639	15	7.3	20	2.8	2.2
5	.81	40	3.4	24	58	146	124	41	32	12	2.0	1.6
6	.51	12	2.8	66	40	120	83	29	11	7.1	14	1.3
7	.50	8.4	3.1	37	29	61	65	18	7.1	4.9	5.0	1.1
8	.48	5.5	3.0	142	23	43	76	15	5.6	3.3	2.7	.89
9	.49	3.7	2.2	39	19	33	47	195	4.1	2.7	1.8	1.8
10	.46	37	2.2	27	16	26	35	60	35	2.3	1.5	60
11	.45	9.8	2.1	52	14	23	29	35	8.8	1.9	1.3	7.5
12	.54	5.9	1.8	74	12	19	24	26	60	3.9	.89	4.3
13	.46	7.9	1.9	42	250	23	21	20	19	4.4	.88	3.3
14	.42	4.6	1.9	153	390	18	18	20	43	2.0	.97	33
15	.46	3.1	1.8	84	597	17	16	22	19	1.6	.81	12
16	.59	4.4	1.6	50	287	13	14	14	18	1.2	.67	6.6
17	1.2	4.3	1.5	35	123	12	12	11	8.6	.99	.55	4.2
18	3.4	2.5	1.5	26	80	14	27	9.2	6.6	.99	.69	2.9
19	1.4	127	1.5	21	56	11	31	8.1	17	440	1.4	2.2
20	1.2	230	1.5	17	100	80	15	34	50	119	2.1	1.6
21	12	35	41	14	150	85	13	12	17	28	7.2	1.4
22	9.4	20	9.3	12	95	41	11	11	11	17	4.4	2.2
23	15	14	30	10	56	31	11	67	6.2	12	45	17
24	5.6	11	81	9.4	37	25	10	18	5.4	8.1	19	5.9
25	2.1	8.3	26	8.8	29	21	9.3	14	4.4	8.7	7.4	3.7
26	1.2	34	16	20	23	18	23	60	3.1	9.5	4.7	2.7
27	.71	47	13	13	19	21	89	17	3.0	4.9	3.4	2.0
28	1.4	16	174	9.7	17	16	23	13	3.0	3.7	2.2	1.5
29	.74	11	46	8.4	---	50	88	9.7	2.8	3.1	1.7	1.5
30	.46	9.2	27	8.2	---	61	29	8.3	2.0	26	1.6	1.7
31	.32	---	20	7.5	---	183	---	7.6	---	17	1.3	---
TOTAL	71.20	739.88	540.1	1087.0	2951.7	1265	1846.3	862.9	429.3	789.88	156.76	223.99
MEAN	2.30	24.7	17.4	35.1	105	40.8	61.5	27.8	14.3	25.5	5.06	7.47
MAX	15	230	174	153	597	183	639	195	60	440	45	60
MIN	.32	.26	1.5	7.5	6.7	11	9.3	7.6	2.0	.99	.55	.89
CFSM	.12	1.30	.92	1.86	5.58	2.16	3.26	1.47	.76	1.35	.27	.40
IN.	.14	1.46	1.06	2.14	5.81	2.49	3.63	1.70	.84	1.55	.31	.44

CAL YR 1988 TOTAL 6138.91 MEAN 16.8 MAX 437 MIN .25 CFSM .89 IN. 12.08
WTR YR 1989 TOTAL 10964.01 MEAN 30.0 MAX 639 MIN .26 CFSM 1.59 IN. 21.58

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1988 to current year.
pH: April 1988 to current year.
WATER TEMPERATURE: April 1988 to current year.
DISSOLVED OXYGEN: April 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1988.

REMARKS.--Water-quality samples collected biweekly. Record good for specific conductance, pH, water temperature, and dissolved oxygen.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 994 microsiemens, Sept. 6, 1989; minimum, 74 microsiemens, July 19, 1989.
pH: Maximum, 9.7 units, Apr. 19, 1989; minimum, 5.6 units, July 19, 1989.
WATER TEMPERATURE: Maximum, 35.4°C, August 16, 1988; minimum, 1.8°C, Dec. 10-13, 1988.
DISSOLVED OXYGEN: Maximum, 18.8 mg/L, Feb. 1, 1989; minimum, 1.5 mg/L, Aug. 3, 12, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 994 microsiemens, Sept. 6; minimum, 74 microsiemens, July 19.
pH: Maximum, 9.7 units, Apr. 19; minimum, 5.6 units, July 19.
WATER TEMPERATURE: Maximum, 32.5°C, July 11; minimum, 1.8°C, Dec. 10-13.
DISSOLVED OXYGEN: Maximum, 18.8 mg/L, Feb. 1; minimum, 3.4 mg/L, Sept. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
06...	1340	0.51	555	8.00	14.0	12.9	126
20...	1310	1.4	554	7.78	12.5	10.2	95
NOV							
03...	1020	0.59	615	7.74	8.5	9.3	80
17...	1320	3.8	620	7.60	11.0	10.3	94
DEC							
02...	1030	5.9	635	8.33	4.5	12.0	91
15...	1300	1.9	696	8.81	5.5	14.5	114
JAN							
06...	1330	67	371	7.70	9.0	10.0	88
20...	1100	18	588	8.10	7.0	11.5	95
FEB							
02...	1300	6.5	619	7.90	11.0	12.6	115
16...	1330	235	298	7.30	9.5	11.6	99
MAR							
02...	1315	14	531	8.45	8.5	16.1	137
16...	1015	13	546	8.02	8.0	14.5	121
30...	1355	41	41	6.10	14.5	9.8	97
APR							
13...	1325	21	502	8.70	13.5	18.2	173
27...	0940	49	281	7.66	18.5	7.6	80
MAY							
11...	1400	33	493	7.70	15.5	11.5	113
25...	1345	14	532	6.70	19.5	8.1	88
JUN							
08...	1100	5.1	537	8.70	21.0	11.2	125
23...	1335	5.7	539	8.00	26.0	16.2	201
JUL							
07...	1340	4.5	546	7.80	27.5	11.5	145
20...	1330	62	427	6.01	21.0	8.5	96
AUG							
03...	1355	3.3	545	8.20	27.5	12.1	154
17...	1315	0.50	526	7.80	24.5	9.4	113
31...	1340	1.5	600	7.94	26.5	9.1	112
SEP							
12...	1400	4.0	533	8.08	23.5	9.8	114
29...	1120	1.3	614	6.20	17.5	7.0	73

BEARGRASS CREEK BASIN

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	641	509	565	630	610	620	632	626	629	566	468	515
2	625	461	521	619	597	611	636	627	632	554	539	545
3	533	480	517	619	605	611	647	636	641	558	554	556
4	552	523	536	667	139	485	654	641	647	557	551	554
5	545	521	534	341	192	266	652	644	648	557	341	537
6	556	524	544	504	345	427	655	647	651	466	309	369
7	569	532	553	584	508	544	662	649	655	571	247	527
8	563	541	554	655	584	617	669	633	653	451	170	336
9	561	546	555	675	656	665	678	650	666	512	454	486
10	563	546	557	680	187	412	682	658	671	538	511	526
11	582	547	568	529	373	448	695	671	683	548	355	503
12	571	556	561	621	532	579	716	680	694	477	347	418
13	561	555	559	636	550	591	701	668	685	529	478	508
14	567	557	560	653	593	627	686	653	671	542	339	460
15	579	566	573	687	654	672	703	662	683	500	392	459
16	658	567	620	688	617	676	712	671	693	532	500	518
17	677	585	649	645	592	620	713	683	700	554	534	544
18	607	524	554	663	640	647	716	692	703	571	554	561
19	613	551	584	655	185	330	705	673	691	585	570	577
20	614	511	569	476	267	364	687	672	680	593	581	587
21	586	310	434	564	480	530	708	240	409	618	589	596
22	435	349	396	601	563	585	538	369	455	606	586	597
23	476	278	394	619	602	609	531	297	430	608	584	600
24	459	356	418	633	619	626	485	224	369	614	598	607
25	541	462	505	646	633	639	562	419	506	622	561	600
26	576	542	563	660	429	626	599	564	583	612	402	527
27	612	577	602	524	430	466	607	574	603	532	466	489
28	634	604	616	585	526	560	575	225	341	584	533	561
29	636	554	596	611	586	599	519	442	489	608	584	596
30	611	568	597	626	612	620	548	522	535	612	580	601
31	618	601	607	---	---	---	559	549	554	619	583	605
MONTH	677	278	547	688	139	556	716	224	602	622	170	531
		FEBRUARY			MARCH			APRIL			MAY	
1	619	579	604	534	530	531	503	425	467	486	474	480
2	626	233	535	548	524	532	528	504	518	492	466	480
3	396	229	304	567	510	543	518	347	477	488	453	472
4	452	397	429	580	514	547	428	103	316	491	425	472
5	473	452	462	651	336	423	456	429	444	441	241	383
6	476	467	470	496	373	437	476	436	467	407	302	346
7	476	470	472	540	498	520	484	431	459	453	409	439
8	481	462	469	562	540	549	499	370	442	473	452	464
9	462	447	454	579	563	568	629	466	534	480	232	353
10	449	440	443	586	570	579	669	560	612	480	349	424
11	442	433	439	592	570	583	711	498	610	501	481	490
12	438	422	430	598	560	582	627	484	568	514	492	506
13	552	234	330	597	544	573	590	480	520	524	501	513
14	311	229	270	591	570	580	537	476	510	530	359	513
15	309	242	256	596	562	579	530	478	509	488	313	424
16	328	257	289	591	146	540	530	441	487	498	466	482
17	378	329	353	571	503	538	525	430	475	522	475	501
18	422	378	399	574	520	551	520	284	417	537	497	518
19	460	423	441	559	518	543	401	265	346	551	511	530
20	477	425	462	558	262	418	460	407	438	504	265	362
21	433	407	416	483	299	403	493	432	461	497	402	461
22	465	434	451	525	485	504	498	439	464	537	479	525
23	527	464	488	528	508	521	498	437	472	429	188	319
24	537	520	531	537	518	529	494	442	467	517	434	485
25	534	524	528	540	485	518	492	440	464	549	514	532
26	540	532	536	521	475	501	477	213	452	545	235	372
27	538	532	534	511	373	474	425	178	304	676	387	520
28	535	529	532	477	380	450	480	427	458	713	503	594
29	---	---	---	503	326	436	482	199	325	712	534	603
30	---	---	---	467	336	404	487	422	461	712	557	618
31	---	---	---	460	219	310	---	---	---	687	522	571
MONTH	626	229	440	651	146	509	711	103	465	713	188	476

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	550	531	542	542	506	522	486	316	411	624	234	470
2	550	519	535	577	494	551	530	489	512	461	355	418
3	546	514	533	504	334	436	561	532	546	527	463	497
4	533	441	492	389	304	346	574	533	554	553	528	546
5	504	238	355	477	383	440	568	516	549	986	552	621
6	461	373	410	521	469	503	566	390	450	994	604	850
7	503	464	483	554	512	537	448	408	421	613	579	598
8	543	505	520	553	531	542	508	450	475	660	578	632
9	543	191	467	563	524	542	525	497	509	637	451	589
10	542	191	331	557	498	532	542	509	522	514	255	340
11	486	324	416	551	511	530	564	526	543	496	379	438
12	517	482	501	579	509	545	579	529	556	559	490	526
13	553	205	461	584	490	547	559	528	542	575	547	562
14	417	291	339	536	450	479	547	523	535	595	252	475
15	398	206	316	519	469	498	546	520	535	459	330	392
16	440	240	402	552	496	516	538	527	533	544	463	504
17	491	163	377	535	494	514	553	526	540	582	540	562
18	547	493	514	525	452	499	566	533	548	601	578	591
19	572	514	539	517	74	297	587	524	557	623	595	609
20	556	388	517	466	137	365	586	492	560	634	605	618
21	466	335	406	537	469	508	---	---	---	647	597	625
22	516	465	488	568	538	551	---	---	---	649	580	621
23	548	517	533	577	568	572	---	---	---	625	420	486
24	550	503	536	582	563	573	---	---	---	513	470	488
25	553	507	538	583	529	571	---	---	---	562	504	535
26	559	513	537	561	401	478	---	---	---	591	553	576
27	565	506	536	558	506	524	---	---	---	601	581	592
28	570	523	546	594	560	570	---	---	---	618	591	602
29	564	504	533	599	567	589	---	---	---	614	582	608
30	536	473	497	577	180	408	---	---	---	635	609	620
31	---	---	---	458	337	399	---	---	---	---	---	---
MONTH	572	163	473	599	74	499	---	---	---	994	234	553

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	7.9	8.0	7.7	7.5	7.6	8.4	8.1	8.3	7.9	7.5	7.7
2	8.6	7.7	8.1	7.6	7.4	7.5	8.5	8.2	8.3	7.8	7.6	7.7
3	8.4	7.7	8.0	7.8	7.4	7.6	8.6	8.3	8.4	7.9	7.7	7.8
4	8.4	7.7	8.1	7.8	7.3	7.5	8.6	8.4	8.5	8.0	7.6	7.8
5	8.6	7.8	8.1	7.4	7.2	7.3	8.7	8.4	8.5	7.8	7.4	7.6
6	8.5	8.0	8.2	7.6	7.4	7.5	8.8	8.5	8.6	7.8	7.2	7.5
7	8.4	7.9	8.1	7.8	7.6	7.7	8.8	8.5	8.6	8.1	7.5	7.9
8	8.5	7.9	8.1	7.8	7.6	7.7	8.9	8.5	8.6	7.9	7.4	7.7
9	8.4	7.8	8.1	7.7	7.6	7.7	9.0	8.6	8.8	8.1	7.9	8.0
10	8.3	7.8	8.0	7.7	7.4	7.5	8.9	8.6	8.8	8.2	8.0	8.1
11	8.1	7.8	7.9	7.6	7.4	7.5	9.1	8.6	8.8	8.2	7.7	8.0
12	8.1	7.9	8.0	7.6	7.5	7.6	9.1	8.7	8.9	7.8	7.7	7.8
13	8.0	7.8	7.9	7.6	7.4	7.5	9.1	8.7	8.8	8.2	7.8	8.0
14	7.9	7.7	7.8	7.6	7.5	7.6	9.1	8.6	8.8	8.1	7.7	7.9
15	7.9	7.6	7.7	7.6	7.5	7.5	9.1	8.6	8.8	8.0	7.8	7.9
16	8.2	7.5	7.8	7.6	7.4	7.5	8.9	8.5	8.7	8.1	8.0	8.0
17	7.9	7.4	7.7	7.7	7.4	7.6	8.8	8.5	8.6	8.2	7.9	8.0
18	7.8	7.2	7.5	7.9	7.6	7.8	8.8	8.3	8.6	8.4	7.9	8.1
19	7.8	7.4	7.6	7.9	7.3	7.5	8.8	8.4	8.6	8.4	8.0	8.1
20	8.1	7.4	7.7	7.6	7.2	7.4	8.5	8.2	8.4	8.2	8.0	8.1
21	7.8	7.4	7.5	7.9	7.6	7.8	8.3	7.7	7.9	8.3	8.0	8.2
22	7.7	7.4	7.5	7.9	7.9	7.8	8.2	7.8	8.0	8.4	8.0	8.1
23	7.6	7.4	7.5	8.1	7.9	8.0	8.4	7.7	8.0	8.4	7.9	8.1
24	7.9	7.4	7.6	8.1	8.0	8.1	8.0	7.6	7.8	8.3	7.8	8.0
25	8.0	7.5	7.7	8.2	8.0	8.1	8.2	7.8	8.0	8.6	7.8	8.1
26	8.0	7.6	7.7	8.2	7.7	8.1	8.2	8.0	8.1	8.0	7.6	7.8
27	7.9	7.5	7.7	7.9	7.7	7.8	8.4	8.0	8.1	8.4	7.6	7.9
28	7.9	7.5	7.7	8.2	7.9	8.1	8.0	7.5	7.7	8.4	7.7	8.0
29	7.7	7.4	7.6	8.3	8.2	8.2	8.0	7.7	7.9	8.1	7.7	7.8
30	7.8	7.4	7.6	8.3	8.1	8.2	8.0	7.9	7.9	8.5	7.7	8.0
31	7.7	7.5	7.6	---	---	---	8.1	7.9	7.9	8.5	7.7	8.0
MONTH	8.6	7.2	7.8	8.3	7.2	7.7	9.1	7.5	8.4	8.6	7.2	7.9

BEARGRASS CREEK BASIN

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.4	7.6	8.0	8.5	7.9	8.2	6.8	6.0	6.4	8.0	7.6	7.7
2	8.0	7.2	7.7	8.5	7.9	8.2	7.0	6.2	6.5	8.1	7.7	7.8
3	7.3	7.0	7.1	8.7	7.8	8.2	7.2	6.1	6.6	8.1	7.6	7.8
4	7.6	7.3	7.5	8.6	7.8	8.2	6.6	6.0	6.3	7.9	7.6	7.7
5	7.7	7.5	7.6	7.8	7.4	7.5	6.9	6.6	6.7	7.9	7.5	7.7
6	7.9	7.6	7.7	7.7	7.5	7.6	7.3	6.9	7.0	7.7	7.3	7.4
7	8.0	7.6	7.8	8.3	7.7	7.9	7.6	6.9	7.3	7.6	7.4	7.5
8	8.1	7.6	7.8	8.5	7.7	8.0	7.5	7.2	7.3	7.6	7.3	7.4
9	8.0	7.7	7.8	8.5	7.6	7.9	8.1	7.5	7.7	7.8	7.2	7.3
10	8.1	7.6	7.8	8.5	7.6	7.9	8.3	7.6	7.9	7.6	7.3	7.5
11	8.1	7.6	7.8	8.6	7.5	7.9	8.5	7.8	8.1	7.9	7.4	7.8
12	8.2	7.5	7.8	8.5	7.5	7.9	8.8	7.9	8.3	7.9	7.3	7.6
13	7.7	7.2	7.4	8.6	7.6	7.9	9.0	7.6	8.4	7.8	7.3	7.5
14	7.4	7.1	7.3	8.3	7.4	7.8	9.1	8.0	8.6	8.0	7.2	7.6
15	7.3	7.1	7.2	8.5	7.3	7.8	9.1	7.9	8.5	7.8	6.8	7.3
16	7.3	7.2	7.2	8.5	7.4	8.0	9.3	8.0	8.7	7.9	7.0	7.4
17	7.3	7.2	7.3	8.4	7.5	8.0	9.5	8.1	8.7	7.8	7.0	7.3
18	7.4	7.2	7.3	7.9	7.4	7.6	9.2	8.0	8.5	7.7	6.9	7.2
19	7.4	7.3	7.3	8.3	7.3	7.8	9.7	7.7	8.6	7.7	6.9	7.2
20	7.3	7.0	7.2	7.7	7.0	7.2	9.5	7.8	8.5	7.4	6.5	6.9
21	7.1	6.9	7.0	7.5	6.9	7.2	9.4	7.8	8.4	7.5	6.5	6.9
22	7.1	7.1	7.1	7.8	7.0	7.3	9.0	7.8	8.2	7.0	6.6	6.8
23	7.3	7.1	7.2	7.8	6.9	7.3	8.7	7.8	8.1	6.9	6.5	6.7
24	7.3	7.2	7.3	7.8	6.8	7.2	9.3	7.9	8.3	7.0	6.6	6.8
25	7.5	7.3	7.4	7.7	6.7	7.1	9.2	7.9	8.3	6.7	6.5	6.6
26	7.4	7.3	7.4	7.6	6.5	7.0	9.1	7.8	8.2	6.7	6.2	6.5
27	7.6	7.3	7.5	7.2	6.2	6.7	8.4	7.6	7.9	7.0	6.5	6.7
28	8.2	7.5	7.9	7.0	6.1	6.5	8.7	7.8	8.2	7.3	6.7	7.0
29	---	---	---	6.4	6.0	6.2	8.1	7.5	7.7	7.5	7.0	7.3
30	---	---	---	6.3	5.9	6.1	8.1	7.6	7.8	7.7	7.1	7.4
31	---	---	---	6.0	5.7	5.9	---	---	---	7.8	7.2	7.5
MONTH	8.4	6.9	7.5	8.7	5.7	7.5	9.7	6.0	7.9	8.1	6.2	7.3
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	7.3	7.6	7.7	7.1	7.4	7.6	7.2	7.4	7.9	7.5	7.7
2	8.0	7.5	7.7	7.6	7.3	7.4	8.0	7.5	7.8	7.9	7.5	7.7
3	8.4	7.6	7.9	7.5	7.2	7.3	8.3	7.8	8.0	8.0	7.7	7.8
4	8.5	7.6	8.0	7.4	7.1	7.2	8.4	8.0	8.2	8.1	7.8	7.9
5	8.0	7.6	7.8	7.5	7.2	7.3	8.2	7.9	8.1	8.1	7.8	7.9
6	8.7	7.8	8.3	7.6	7.3	7.4	8.1	7.9	8.0	8.0	7.7	7.8
7	8.8	8.0	8.4	8.0	7.5	7.7	8.4	7.9	8.1	8.0	7.6	7.8
8	9.2	8.2	8.7	7.9	7.4	7.6	8.3	8.0	8.2	7.9	7.6	7.7
9	9.1	8.0	8.7	7.8	7.3	7.5	8.4	8.1	8.2	7.9	7.5	7.7
10	8.5	8.0	8.3	7.6	7.1	7.3	8.3	7.9	8.1	7.9	7.1	7.4
11	8.8	8.1	8.4	7.3	7.0	7.1	8.3	7.9	8.1	7.8	7.5	7.7
12	8.8	8.3	8.5	7.1	6.8	7.0	8.2	7.9	8.0	8.1	7.7	7.9
13	8.6	7.8	8.2	7.2	6.9	7.0	8.1	7.8	7.9	8.0	7.7	7.9
14	8.4	7.8	8.0	7.1	6.7	6.9	8.1	7.7	7.8	7.8	7.2	7.5
15	8.0	7.7	7.8	6.9	6.6	6.7	8.1	7.7	7.8	7.3	7.2	7.3
16	8.1	7.7	7.9	6.9	6.5	6.7	7.8	7.5	7.7	7.5	7.3	7.4
17	7.9	7.5	7.7	6.7	6.4	6.5	7.8	7.6	7.7	7.4	7.2	7.3
18	8.0	7.7	7.9	6.5	6.2	6.3	8.0	7.6	7.8	7.5	7.3	7.4
19	7.9	7.6	7.8	6.2	5.6	6.0	8.0	7.7	7.9	7.3	7.1	7.3
20	7.8	7.5	7.6	6.1	5.7	6.0	8.0	7.7	7.9	7.3	7.1	7.2
21	7.8	7.3	7.5	6.5	6.1	6.4	---	---	---	7.1	6.8	6.9
22	8.1	7.3	7.7	6.7	6.5	6.5	---	---	---	6.9	6.7	6.8
23	8.2	7.5	7.8	6.8	6.5	6.6	---	---	---	6.9	6.6	6.7
24	8.1	7.4	7.7	7.0	6.7	6.8	---	---	---	6.8	6.6	6.6
25	7.9	7.4	7.6	7.1	6.6	6.9	---	---	---	6.8	6.5	6.6
26	7.8	7.3	7.5	7.2	6.7	7.0	---	---	---	6.6	6.3	6.5
27	7.9	7.3	7.6	7.5	6.9	7.2	---	---	---	6.5	6.3	6.4
28	7.9	7.4	7.6	7.6	7.2	7.4	---	---	---	6.5	6.3	6.4
29	7.8	7.3	7.5	7.8	7.3	7.5	---	---	---	6.3	6.0	6.2
30	7.7	7.2	7.4	7.5	7.0	7.3	---	---	---	6.4	6.0	6.2
31	---	---	---	7.5	7.2	7.3	---	---	---	---	---	---
MONTH	9.2	7.2	7.9	8.0	5.6	7.0	---	---	---	8.1	6.0	7.3

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.8	21.2	21.9	13.3	8.5	10.5	8.6	6.1	7.2	9.5	7.4	8.6
2	24.0	20.8	22.2	11.9	7.8	9.9	6.6	4.0	5.4	8.5	8.0	8.3
3	21.8	17.9	19.7	12.7	8.1	10.2	8.5	4.2	6.2	8.8	7.1	8.3
4	19.2	15.5	17.4	16.5	12.6	14.5	7.7	5.1	6.5	8.0	5.8	6.9
5	18.8	12.9	15.4	15.7	12.2	14.3	6.7	3.7	5.2	7.9	5.6	6.8
6	17.1	14.0	15.3	12.1	9.0	10.1	7.1	3.5	5.3	10.3	5.9	8.2
7	16.2	11.4	13.7	12.6	8.6	10.4	9.2	5.6	7.4	14.1	9.5	11.1
8	15.5	12.0	14.1	14.5	10.9	12.6	7.7	5.9	6.9	14.3	8.6	10.7
9	16.3	12.0	14.2	13.2	8.8	11.1	5.9	3.7	5.1	8.8	7.6	8.2
10	16.0	13.5	15.0	16.5	12.8	15.0	4.4	1.8	3.1	9.3	6.7	8.1
11	14.8	10.3	12.3	13.0	9.5	11.0	3.0	1.8	2.0	9.2	7.7	8.3
12	12.1	9.3	10.7	10.7	8.1	9.5	1.8	1.8	1.8	11.4	8.5	10.4
13	12.5	9.2	10.8	13.6	10.1	11.6	3.4	1.8	2.3	9.9	7.8	8.8
14	14.9	11.2	12.8	13.2	8.3	10.9	6.4	1.9	4.0	8.1	4.0	6.4
15	14.0	12.4	13.0	15.1	9.5	12.2	6.2	3.4	4.9	9.0	6.8	8.4
16	19.0	13.5	16.0	15.4	9.5	13.4	3.3	1.9	2.3	9.9	7.9	8.9
17	18.6	16.0	18.0	12.3	6.3	8.6	2.2	1.9	2.0	9.8	7.2	8.4
18	15.8	12.1	14.1	8.6	4.6	6.9	2.1	2.0	2.0	10.3	7.5	8.9
19	15.7	10.7	12.9	11.9	7.5	9.2	4.1	2.0	2.9	9.9	7.3	8.8
20	13.4	10.6	12.2	13.2	10.8	12.0	8.5	4.1	6.2	8.6	6.1	7.3
21	12.6	11.9	12.2	11.6	10.3	11.1	10.3	8.0	9.4	6.8	4.5	5.8
22	14.3	11.3	12.7	11.0	8.7	10.0	9.8	7.0	7.9	7.5	4.3	6.0
23	11.5	9.9	10.7	10.7	7.7	9.3	11.9	9.7	10.9	8.1	4.9	6.7
24	12.5	9.5	10.9	11.9	8.0	10.0	12.2	3.7	11.0	9.1	7.4	8.2
25	12.6	8.7	10.5	13.6	9.9	11.7	10.6	8.3	9.3	12.4	9.1	10.6
26	11.5	7.6	9.7	13.2	10.7	11.9	8.1	6.7	7.6	11.8	8.4	10.5
27	11.5	6.8	9.4	12.6	10.1	11.9	12.2	7.7	9.7	9.2	6.4	7.9
28	13.3	11.2	12.2	10.0	6.8	8.4	12.1	6.3	8.2	9.3	6.2	8.0
29	11.1	7.9	9.7	8.9	5.8	7.3	8.5	6.6	7.6	9.8	9.1	9.5
30	11.4	8.8	10.0	8.8	7.3	8.0	9.2	7.5	8.3	10.3	8.6	9.7
31	11.3	6.6	8.7	---	---	---	9.5	7.1	8.5	11.3	7.3	9.2
MONTH	24.0	6.6	13.5	16.5	4.6	10.8	12.2	1.8	6.0	14.3	4.0	8.4
		FEBRUARY			MARCH			APRIL			MAY	
1	12.7	9.4	10.9	10.3	6.0	8.3	15.1	9.2	11.8	17.7	14.9	16.0
2	11.6	8.4	10.8	10.0	6.6	8.3	14.4	11.3	12.7	15.3	12.9	14.1
3	8.3	6.3	7.3	13.2	7.5	10.6	16.3	12.5	14.3	18.4	11.0	14.7
4	8.9	8.1	8.4	16.3	10.9	13.6	15.7	13.4	14.8	16.4	12.6	14.9
5	8.7	7.7	8.3	15.3	6.4	10.1	14.1	12.0	13.0	16.9	14.6	15.5
6	7.8	5.3	6.7	7.3	5.4	6.6	15.3	11.2	13.2	15.4	11.9	13.8
7	7.5	4.9	6.1	7.9	5.7	6.8	16.2	12.1	14.0	16.6	10.0	13.0
8	7.3	4.3	5.8	10.8	5.9	8.1	13.5	10.9	11.8	18.2	11.1	14.6
9	5.4	2.1	3.8	12.8	7.6	10.0	13.8	9.8	11.5	17.3	14.1	15.4
10	6.6	2.7	4.7	12.5	7.8	10.1	14.6	9.9	12.0	17.7	12.9	15.1
11	8.7	4.7	6.6	15.1	8.2	11.6	15.5	9.1	12.1	16.7	12.9	14.9
12	8.4	4.7	6.7	13.3	9.7	11.7	17.1	9.6	13.2	15.9	11.7	14.0
13	7.4	3.7	5.5	13.3	9.2	11.1	16.6	11.8	14.1	14.4	12.5	13.5
14	8.6	5.8	7.5	15.1	10.6	12.8	14.0	9.6	12.1	18.0	12.7	15.0
15	8.4	5.2	6.9	14.3	10.1	12.3	14.4	11.5	12.7	18.6	14.8	16.7
16	9.7	7.1	8.5	13.0	6.6	10.0	18.2	10.1	14.1	20.2	13.3	16.7
17	8.6	7.5	8.1	15.5	8.1	12.1	18.5	12.6	15.8	20.6	14.1	17.6
18	10.2	6.8	8.3	15.1	7.7	12.0	19.1	14.0	16.7	19.0	16.0	17.4
19	10.2	7.5	8.7	11.8	5.3	8.7	18.7	12.7	15.6	18.8	16.6	17.7
20	8.8	7.6	8.3	9.9	7.1	8.1	19.0	11.7	15.5	22.5	17.1	19.5
21	8.5	7.7	8.1	8.6	7.1	7.7	20.2	12.7	16.6	23.4	17.0	20.5
22	8.4	7.2	7.8	11.9	5.8	8.6	19.0	14.4	17.2	21.1	17.0	18.3
23	8.3	5.2	6.6	11.8	7.0	9.5	17.5	13.7	14.9	20.6	15.9	18.0
24	8.8	4.8	6.8	16.0	9.2	12.4	19.4	12.7	15.5	21.8	15.7	18.7
25	11.8	6.9	9.2	16.3	10.5	13.2	23.2	16.1	19.6	19.9	17.8	18.8
26	12.6	9.9	11.1	18.2	10.7	14.6	25.2	18.9	21.9	22.4	18.9	20.7
27	10.8	8.0	9.4	17.0	11.7	14.7	23.4	18.2	20.8	22.5	17.7	20.2
28	11.4	6.8	9.1	18.8	13.4	16.4	23.6	18.5	21.0	21.3	15.3	18.7
29	---	---	---	17.3	14.8	15.9	22.3	18.9	20.6	23.0	17.3	20.3
30	---	---	---	15.5	13.0	14.3	20.5	16.7	18.8	25.9	19.4	22.8
31	---	---	---	12.9	9.8	10.7	---	---	---	26.9	21.5	24.3
MONTH	12.7	2.1	7.7	18.8	5.3	11.0	25.2	9.1	15.3	26.9	10.0	17.1

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.3	22.3	25.3	26.2	23.0	24.8	26.6	22.6	24.5	27.1	22.4	24.8
2	25.4	22.8	24.2	24.1	20.3	22.1	28.0	23.2	25.6	25.9	21.5	23.4
3	25.9	21.2	23.4	22.2	19.3	20.3	27.4	23.9	25.5	25.4	21.0	23.4
4	25.2	21.1	23.1	22.8	19.5	20.9	29.0	23.1	26.3	24.5	19.5	22.3
5	23.2	18.5	20.3	23.3	19.4	21.3	30.1	24.8	27.5	26.1	21.4	23.8
6	22.7	16.5	19.5	25.6	20.7	23.2	25.1	21.1	23.3	26.6	22.0	24.3
7	24.5	18.1	21.5	28.7	22.7	25.6	23.1	18.8	21.0	27.5	14.3	24.6
8	23.1	19.8	21.6	29.5	23.1	26.4	23.4	17.1	20.4	27.8	22.4	24.8
9	23.2	19.2	21.3	30.1	23.6	27.0	23.9	17.2	20.9	28.1	23.7	25.5
10	22.9	19.3	21.2	32.1	24.7	28.5	25.1	18.3	21.8	24.9	22.1	22.9
11	23.2	17.7	20.5	32.5	26.2	28.9	25.1	19.6	22.4	23.8	20.5	22.0
12	23.9	17.0	21.0	30.2	25.1	27.2	25.5	20.1	22.6	23.6	20.0	21.9
13	23.5	20.9	22.1	26.9	24.2	25.5	26.0	20.3	22.9	24.8	19.5	22.3
14	23.9	20.0	21.7	28.2	22.0	25.2	26.0	20.9	23.2	23.4	20.0	21.6
15	22.9	20.5	21.6	26.6	21.9	24.7	26.7	21.8	23.9	19.8	18.0	18.6
16	21.5	18.8	20.1	28.7	21.9	24.9	25.7	22.7	24.1	20.4	17.6	18.8
17	20.8	18.8	19.6	29.2	22.3	25.4	24.5	22.3	23.4	21.0	17.6	19.2
18	22.4	16.5	19.5	29.5	22.3	25.6	24.4	21.7	22.9	21.4	16.6	19.1
19	23.9	18.9	21.4	26.8	21.9	24.1	25.7	20.2	22.9	21.7	16.7	19.5
20	24.1	21.3	22.7	22.3	20.6	21.4	24.4	20.3	22.9	22.0	17.3	19.9
21	24.3	21.1	22.4	24.4	19.8	22.0	---	---	---	24.5	19.9	21.9
22	24.3	20.9	22.9	25.6	20.5	23.0	---	---	---	23.4	21.4	22.6
23	27.6	22.0	24.6	26.9	21.5	24.1	---	---	---	21.3	15.7	18.4
24	28.3	22.9	25.5	27.5	22.8	25.3	---	---	---	16.7	12.6	14.9
25	29.6	22.9	26.2	28.0	23.7	25.8	---	---	---	16.0	13.7	14.8
26	29.8	23.8	26.9	28.8	23.7	26.2	---	---	---	18.7	14.0	16.3
27	28.7	24.9	26.9	29.5	24.8	27.1	---	---	---	17.9	13.1	15.5
28	27.8	23.9	25.8	29.8	24.8	27.2	---	---	---	17.9	12.9	15.4
29	28.6	22.3	25.6	29.0	23.6	26.4	---	---	---	18.4	17.3	17.7
30	28.6	20.9	24.9	26.1	22.7	24.1	---	---	---	19.9	17.5	18.6
31	---	---	---	25.0	21.8	23.3	---	---	---	---	---	---
MONTH	29.8	16.5	22.8	32.5	19.3	24.8	---	---	---	28.1	12.6	20.6

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.5	8.8	10.2	14.7	8.3	11.4	11.2	7.6	9.0	11.5	9.4	10.1
2	9.8	7.6	8.9	15.1	8.2	11.3	---	---	---	10.7	9.5	10.0
3	8.2	6.9	7.5	11.7	9.3	10.6	13.5	10.3	11.4	11.7	9.7	10.3
4	8.7	5.4	6.9	9.1	6.0	7.2	14.0	9.6	11.4	13.4	10.2	11.3
5	17.5	5.3	9.7	7.1	5.8	6.5	14.5	10.6	12.0	13.5	10.0	11.0
6	15.7	8.7	11.9	8.2	6.7	7.6	14.8	10.6	12.1	10.6	9.6	10.0
7	15.1	8.5	11.5	10.0	7.0	8.2	14.7	10.0	11.7	11.2	9.0	10.0
8	14.5	8.1	11.4	8.2	6.3	7.0	14.9	9.6	11.6	10.6	8.9	9.9
9	14.6	8.1	11.2	8.2	6.2	7.0	15.3	10.2	12.4	11.8	10.3	10.8
10	13.6	9.1	11.0	7.3	6.3	6.8	16.0	10.9	12.9	12.2	10.2	10.9
11	13.4	7.8	10.4	9.0	7.1	8.1	15.8	11.0	13.0	11.9	10.2	10.6
12	12.4	10.0	11.3	9.4	7.8	8.4	16.1	11.7	13.5	10.4	9.7	9.9
13	11.6	10.3	10.9	8.6	7.3	7.9	16.1	11.2	13.3	12.1	9.8	10.7
14	11.4	9.7	10.7	9.7	7.3	8.2	15.7	10.7	12.7	11.6	10.3	10.8
15	11.1	7.8	9.3	9.8	6.5	8.0	16.3	9.0	12.2	10.7	10.1	10.4
16	14.3	5.6	9.4	8.6	6.0	7.0	16.8	9.6	12.9	11.9	10.1	10.7
17	10.3	5.1	7.8	10.5	6.7	8.4	16.3	10.6	13.3	12.2	10.0	10.8
18	12.1	3.9	7.4	12.2	5.3	9.1	17.4	11.1	13.8	12.7	9.9	10.8
19	12.2	5.2	8.5	---	---	---	17.1	11.1	13.8	13.4	9.8	11.1
20	13.2	5.3	8.9	---	---	---	12.6	9.1	10.6	11.9	9.7	10.5
21	9.7	6.2	7.7	---	---	---	9.6	8.2	9.0	13.9	9.7	11.2
22	9.6	7.0	8.0	---	---	---	11.8	8.8	9.8	14.4	9.6	11.3
23	8.8	6.6	7.6	---	---	---	11.2	8.4	9.4	15.4	9.5	11.5
24	10.9	7.5	8.8	---	---	---	9.1	8.6	8.9	14.2	8.8	10.6
25	11.8	7.2	9.1	---	---	---	11.5	8.9	10.0	17.3	8.6	11.4
26	12.1	7.2	9.3	---	---	---	12.0	9.7	10.5	9.5	8.0	8.8
27	13.1	7.1	9.8	---	---	---	13.0	8.7	10.4	16.0	9.3	11.7
28	12.3	6.3	9.4	---	---	---	10.6	8.5	9.9	17.4	9.5	12.2
29	12.5	6.0	9.1	---	---	---	11.5	9.9	10.4	13.2	8.8	10.4
30	14.5	6.7	10.4	11.9	6.5	11.3	11.6	9.6	10.3	17.3	8.9	11.9
31	14.3	8.6	11.3	---	---	---	12.3	9.6	10.4	18.3	9.5	12.6
MONTH	17.5	3.9	9.5	---	---	---	---	---	---	18.3	8.0	10.8

03293000 MIDDLE FORK BEARGRASS CREEK AT LOUISVILLE, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	18.8	8.8	12.1	15.9	9.3	11.8	11.4	7.0	9.1	13.6	6.2	9.1
2	14.4	8.4	10.1	16.1	8.5	11.6	12.1	6.7	8.6	15.9	6.9	10.7
3	10.5	9.9	10.3	16.9	8.0	11.3	11.6	6.6	8.2	16.9	7.1	11.4
4	11.3	10.1	10.5	16.5	7.4	10.3	8.7	6.8	7.3	16.5	5.5	9.6
5	11.8	10.1	10.6	9.6	7.0	8.8	8.2	7.2	7.6	15.7	4.6	7.5
6	13.3	10.2	11.4	9.9	9.5	9.7	9.9	7.3	8.2	12.1	5.8	8.4
7	14.0	10.7	11.9	12.6	9.5	10.6	---	---	---	16.4	6.7	10.5
8	14.4	10.7	12.0	14.0	9.2	11.0	---	---	---	16.2	5.0	10.1
9	15.1	11.4	12.8	15.0	8.9	11.2	---	---	---	6.7	3.8	5.6
10	15.5	10.9	12.8	15.8	8.8	11.4	---	---	---	9.7	5.8	7.7
11	16.1	10.5	12.6	17.0	8.3	11.7	---	---	---	11.5	5.7	8.3
12	17.4	10.5	13.0	17.7	8.2	11.9	---	---	---	12.5	6.8	9.3
13	12.1	10.4	11.4	15.8	8.4	10.8	---	---	---	12.3	6.9	9.2
14	11.7	11.0	11.3	17.4	8.1	11.2	---	---	---	14.6	6.7	10.0
15	12.1	11.1	11.6	18.3	7.5	11.8	---	---	---	14.1	5.8	9.3
16	11.7	10.8	11.4	17.0	7.0	11.7	---	---	---	16.0	6.4	10.3
17	12.1	11.0	11.5	17.1	5.9	10.4	---	---	---	17.0	6.1	10.7
18	12.9	10.8	11.7	11.2	5.1	7.7	---	---	---	15.9	5.7	9.4
19	13.1	10.6	11.5	17.9	7.1	11.3	---	---	---	14.6	5.6	9.3
20	11.6	10.5	10.8	8.7	6.5	7.8	---	---	---	12.3	6.0	8.7
21	10.7	10.3	10.5	11.2	8.5	9.3	---	---	---	13.6	5.4	8.7
22	12.1	10.5	11.0	13.3	8.1	10.3	---	---	---	9.0	5.0	7.0
23	13.2	10.7	11.6	14.6	8.0	10.7	---	---	---	9.8	7.1	8.2
24	13.6	10.4	11.6	15.9	7.4	10.8	---	---	---	10.9	6.8	8.4
25	13.8	9.7	11.4	17.5	7.3	11.0	---	---	---	8.9	6.4	7.4
26	14.0	9.6	11.1	18.0	7.2	11.4	---	---	---	7.5	6.7	7.1
27	14.7	9.7	11.4	17.4	5.7	10.1	11.0	5.7	8.0	9.9	6.8	8.1
28	15.2	9.4	11.6	16.2	5.7	10.1	14.8	5.5	9.2	10.4	7.1	8.6
29	---	---	---	9.6	6.5	7.8	9.2	5.5	7.1	10.8	6.7	8.6
30	---	---	---	10.2	7.1	8.6	14.0	6.1	9.3	11.3	6.4	8.4
31	---	---	---	8.4	7.1	8.0	---	---	---	11.9	6.0	8.6
MONTH	18.8	8.4	11.5	18.3	5.1	10.4	---	---	---	17.0	3.8	8.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.5	5.7	8.8	13.5	4.5	8.4	10.8	6.1	7.9	8.7	5.5	7.0
2	11.7	5.5	8.4	8.5	4.8	6.5	12.5	6.0	8.7	10.0	7.0	8.2
3	14.5	5.9	9.3	9.3	6.2	7.3	12.3	4.5	7.5	11.1	6.5	8.4
4	14.6	5.6	9.1	9.1	7.0	7.7	12.1	4.2	7.6	12.3	6.5	3.9
5	8.8	6.3	7.8	10.4	6.8	8.2	11.1	3.8	7.3	12.0	5.8	8.4
6	13.7	7.6	10.3	11.0	6.2	8.3	8.7	4.4	6.3	10.8	5.4	7.4
7	14.3	6.8	10.2	11.9	5.7	8.3	11.6	5.5	8.2	10.5	5.1	6.9
8	14.5	6.2	9.7	12.5	4.8	8.0	12.7	5.8	8.9	9.8	4.9	6.3
9	14.7	6.5	9.8	12.7	4.7	8.2	13.0	5.9	9.1	9.0	4.5	6.0
10	9.0	6.7	8.0	11.9	4.2	7.8	13.3	5.6	8.9	7.0	6.0	6.7
11	12.9	7.7	9.8	11.4	3.9	7.0	13.2	5.2	8.8	8.8	6.4	7.2
12	14.7	7.6	10.6	10.8	3.7	6.4	12.4	5.3	8.4	9.9	6.1	7.5
13	13.6	7.0	9.0	11.1	4.9	7.4	12.3	5.1	8.1	10.2	5.8	7.6
14	12.1	8.0	9.4	11.4	5.1	8.0	12.0	5.2	7.9	7.2	5.0	6.0
15	9.7	8.1	9.0	11.9	5.1	8.3	12.4	5.0	7.7	7.4	6.5	6.8
16	11.9	8.8	10.1	12.0	5.0	8.3	9.0	4.9	6.6	8.8	6.5	7.4
17	11.5	8.7	9.9	11.8	4.7	8.0	9.9	4.8	6.7	9.5	6.3	7.4
18	13.6	9.4	11.2	12.0	4.6	8.1	11.4	5.2	7.6	10.3	6.3	7.9
19	14.6	9.0	11.2	7.9	5.6	6.8	12.8	6.0	8.9	10.7	6.1	8.0
20	13.7	8.5	10.5	8.5	7.5	8.1	10.5	5.2	7.6	10.9	5.7	7.9
21	13.8	9.0	10.8	9.1	7.4	8.3	---	---	---	10.0	4.9	6.8
22	14.4	8.9	11.4	10.0	6.9	8.3	---	---	---	8.8	4.3	6.1
23	16.9	7.6	12.0	10.7	6.4	8.3	---	---	---	8.8	5.5	7.1
24	16.5	5.9	10.3	11.6	6.3	8.5	---	---	---	10.7	7.2	8.6
25	16.5	5.7	10.4	12.2	6.0	8.3	---	---	---	10.6	7.0	8.4
26	14.9	5.0	9.5	11.5	5.5	7.9	---	---	---	10.8	6.0	8.3
27	13.8	4.8	8.7	11.7	5.3	8.0	---	---	---	11.8	6.8	8.8
28	14.1	4.9	8.0	12.3	5.3	8.1	---	---	---	12.1	6.7	8.9
29	14.3	5.1	9.3	13.2	5.4	8.8	---	---	---	10.4	5.2	7.7
30	14.6	5.1	9.4	7.4	5.5	6.6	---	---	---	10.9	3.4	6.9
31	---	---	---	9.7	6.2	7.3	---	---	---	---	---	---
MONTH	16.9	4.8	9.8	13.5	3.7	7.9	---	---	---	12.3	3.4	7.5

BEARGRASS CREEK BASIN

03293200 MIDDLE FORK BEARGRASS CREEK AT BEALS BRANCH ROAD AT LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°14'32",long 85°41'57", Jefferson County, Hydrologic Unit 05140101, at bridge on Beals Branch Road and at mile 1.9.

DRAINAGE AREA.--22.7 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
OCT							
06...	1010	0.52	534	7.80	12.0	6.0	56
20...	1000	0.64	596	8.37	10.5	6.3	56
NOV							
03...	0930	0.77	425	8.02	8.0	5.9	50
17...	1000	3.9	682	8.10	8.0	7.9	67
DEC							
02...	0930	6.6	672	8.48	3.5	11.7	87
15...	0930	2.0	677	8.68	4.0	12.3	93
JAN							
06...	1000	89	304	7.80	7.0	10.7	90
20...	1000	20	591	8.00	6.0	11.0	89
FEB							
02...	1000	6.0	593	7.90	10.5	8.4	75
16...	1035	258	269	7.70	7.5	9.9	80
MAR							
02...	1020	16	346	7.60	5.5	13.4	106
16...	0915	15	543	7.87	6.5	9.8	79
30...	1120	57	386	7.60	15.5	8.8	89
APR							
13...	1005	25	537	7.90	10.5	11.4	101
27...	0900	73	246	7.36	19.5	7.4	80
MAY							
11...	1040	41	505	7.80	14.0	9.5	90
25...	1055	15	524	7.30	20.5	6.4	71
JUN							
08...	0930	5.5	488	8.54	21.5	4.1	46
23...	1040	6.7	535	7.00	23.5	7.5	88
JUL							
07...	1040	5.7	518	7.20	25.0	6.3	76
20...	1030	105	374	6.45	20.5	8.2	91
AUG							
03...	1030	4.7	514	7.90	25.0	4.3	52
17...	0950	0.63	536	7.70	22.5	5.1	59
31...	1000	1.4	563	7.31	23.5	3.0	35
SEP							
12...	0950	4.9	420	6.79	21.0	4.3	47
29...	1000	1.4	581	6.20	16.0	4.6	47

03293530 MUDDY FORK AT MOCKINGBIRD VALLEY ROAD AT LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°16'35", long 85°41'37", Jefferson County, Hydrologic Unit 05140101, at culvert on Mockingbird Valley Road and at mile 1.5.

DRAINAGE AREA.--6.2 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
06...	0850	0.57	757	8.00	9.0	10.2	89
20...	0850	0.68	815	7.66	8.0	6.5	54
NOV							
03...	0830	0.93	793	7.38	6.0	7.1	57
17...	0840	1.9	886	8.30	6.5	9.4	77
DEC							
02...	0830	2.9	892	8.27	2.0	11.5	82
15...	0840	1.5	706	7.88	4.0	11.8	89
JAN							
06...	0835	46	424	7.80	7.0	10.2	86
20...	0840	6.9	738	7.80	6.0	9.7	79
FEB							
02...	0900	2.8	775	7.58	10.0	9.6	85
16...	0905	102	323	7.20	7.5	10.4	84
MAR							
02...	0900	6.5	437	7.90	5.0	10.6	82
16...	0815	6.6	680	7.99	6.0	11.0	87
30...	1030	20	579	7.80	14.0	8.7	85
APR							
13...	0910	10	669	7.70	9.5	9.6	84
24...	1415	5.4	664	8.08	16.5	16.3	165
MAY							
11...	0930	11	653	7.50	12.5	8.0	74
25...	0945	6.5	670	7.50	17.5	7.6	79
JUN							
08...	0910	2.3	668	7.52	18.0	7.9	82
23...	0915	2.9	689	7.30	21.0	9.1	102
JUL							
07...	0925	2.1	[illegible]	7.10	22.5	8.4	97
20...	0920	15	[illegible]	6.37	20.5	7.5	83
AUG							
03...	0900	1.2	671	7.70	22.5	6.8	79
17...	0900	0.70	664	7.60	20.5	6.9	77
31...	0900	0.64	736	7.71	22.0	7.4	83
SEP							
12...	0900	1.0	539	8.10	19.5	8.5	91
29...	0900	0.73	682	6.40	15.5	8.2	82

OHIO RIVER MAIN STEM

03294500 OHIO RIVER AT LOUISVILLE, KY

LOCATION.--Lat 38°16'49", long 85°47'57", Jefferson County, Hydrologic Unit 05140101, on left bank at downstream end of lock guide wall in lower pool at McAlpine Locks, at Louisville, 5.3 mi downstream from Beargrass Creek and at mile 607.3.

DRAINAGE AREA.--91,170 mi^2, approximately.

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1935 monthly discharge only, published in WSP 1305. Gage-height records collected in this vicinity since 1871 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 893: 1939.

GAGE.--Water-stage recorder. Datum of gage is 373.18 ft above National Geodetic Vertical Datum of 1929 or 374.00 ft Ohio River datum. Prior to Oct. 1, 1939, and Oct. 1, 1943, to Sept. 30, 1946, various combinations of gages near Louisville were used. Oct. 1, 1939, to Sept. 30, 1943 water-stage recorders at Louisville and Kosmosdale, downstream from McAlpine Dam (4 mi and 20.1 mi, respectively), were used to determine discharge. Oct. 1, 1946, to Sept. 30, 1961, nonrecording gage at site 0.3 mi upstream at same datum. Oct. 1, 1952, to Sept. 30, 1970, upper nonrecording gage at dam 43, 25.9 mi downstream used as an auxiliary gage. Since Oct. 1, 1970, auxiliary water-stage recorder at Kosmosdale, 19.8 mi downstream.

REMARKS.--Estimated daily discharges: Oct. 22-24, Nov. 20 to Dec. 14 and Sept. 12-14. Records good except those for estimated daily discharges and those below 20,000 ft^3/s, which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs.

AVERAGE DISCHARGE.--61 years, 115,500 ft^3/s, 17.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110,000 ft^3/s, Jan. 26, 27, 1937; maximum gage height, 85.44 ft, Jan. 27, 1937; minimum daily discharge, 2,100 ft^3/s, Aug. 12, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 473,000 ft^3/s, Feb. 19, maximum gage height, 58.37 ft, Feb. 19, 20; minimum daily, 6,900 ft^3/s, Dec. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15100	11200	49000	158000	75100	184000	325000	332000	194000	209000	59700	63600
2	11500	23800	54800	139000	70300	153000	365000	331000	158000	195000	46900	60600
3	14000	16900	65400	119000	92300	128000	388000	310000	139000	152000	35300	52500
4	14800	9030	46000	105000	154000	111000	445000	293000	137000	128000	35900	30700
5	12200	21700	40200	102000	213000	108000	452000	294000	122000	118000	40000	27000
6	16600	21500	37000	108000	242000	198000	414000	287000	131000	105000	44400	25100
7	17300	60700	28300	107000	226000	289000	377000	266000	129000	109000	73600	28500
8	13400	88300	36400	146000	156000	388000	354000	279000	133000	121000	79100	23600
9	16700	77200	40200	202000	125000	439000	332000	321000	141000	120000	50700	27800
10	14800	43600	41900	204000	90100	455000	312000	357000	149000	101000	26400	58200
11	11200	70700	34100	195000	66000	425000	290000	357000	137000	99000	33200	24700
12	10700	72500	23600	205000	57400	336000	265000	359000	123000	95200	25300	13800
13	18600	56900	15700	227000	63500	259000	233000	375000	122000	75000	17100	35000
14	20600	46800	19200	236000	184000	201000	196000	382000	117000	85100	17800	27200
15	19600	49800	22700	285000	292000	178000	166000	380000	145000	88600	15500	37300
16	19500	59100	9780	330000	400000	162000	146000	366000	176000	67600	12100	83200
17	29200	70500	6900	322000	437000	143000	130000	345000	240000	49900	20900	127000
18	27000	62300	14700	294000	451000	128000	109000	330000	314000	38200	24600	173000
19	17700	53100	17100	257000	473000	115000	115000	313000	371000	57000	32400	159000
20	17900	106000	18700	207000	464000	120000	135000	288000	385000	69800	34500	102000
21	25400	232000	12800	141000	426000	199000	144000	261000	363000	60400	45700	77000
22	21400	264000	30700	101000	392000	245000	142000	226000	314000	74300	55000	67400
23	21200	256000	51900	77900	396000	279000	123000	200000	283000	88200	80200	65000
24	27600	228000	102000	71100	449000	317000	102000	230000	292000	47100	102000	124000
25	24600	173000	185000	54000	417000	304000	82800	238000	312000	54100	127000	186000
26	26400	141000	234000	50600	363000	264000	76400	226000	295000	52500	155000	198000
27	27600	119000	255000	54100	291000	221000	132000	243000	258000	42900	151000	157000
28	27000	75900	254000	56100	239000	198000	208000	261000	218000	41800	108000	121000
29	16000	74000	233000	60800	---	180000	276000	272000	190000	68700	63000	99500
30	11600	69200	186000	73200	---	222000	327000	257000	200000	70800	58100	76300
31	7500	---	170000	74100	---	263000	---	230000	---	67500	64800	---
TOTAL	574700	2653730	2336080	4761900	7314700	7212000	7162200	9209000	6288000	2751700	1735200	2351000
MEAN	18540	88460	75360	153600	261200	232600	238700	297100	209600	88760	55970	78370
MAX	29200	264000	255000	330000	473000	455000	452000	382000	385000	209000	155000	198000
MIN	7500	9030	6900	50600	57400	108000	76400	200000	117000	38200	12100	13800

CAL YR 1988 TOTAL 25949570 MEAN 70900 MAX 380000 MIN 6900
WTR YR 1989 TOTAL 54350210 MEAN 148900 MAX 473000 MIN 6900

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY

LOCATION.--Lat 38°10'39", long 85°52'01", Jefferson County, Hydrologic Unit 05140102, on left bank at bridge on Highway 1230, 0.8 mi downstream from confluence with Big Run Creek, 1.5 mi upstream from Ohio River, and at mile 616.3.

DRAINAGE AREA.--24.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1988 to current year.

GAGE.--Water-stage recorder.

REMARKS.--No estimated daily discharges. Water-discharge records for May to September 1988 good. Estimated daily discharges: Feb. 15. to Mar. 11, Apr. 4-7 and Aug. 29 to Sept. 18. Water-discharge records for water year 1989 fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft^3/s, July 19, 1989; gage height, 9.95 ft; no flow at times.

EXTREMES FOR CURRENT PERIOD.--May to September 1988: Maximum daily discharge, 1,160 ft^3/s, July 20, gage height, 7.42 ft; minimum discharge, no flow many days.

Water year 1989: Maximum discharge, 1,980 ft^3/s, July 19, gage height, 9.95 ft., minimum, no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
2	---	---	---	---	---	---	---	---	.00	.00	.00	.00
3	---	---	---	---	---	---	---	---	.00	.00	.00	.24
4	---	---	---	---	---	---	---	---	.00	.00	.00	.65
5	---	---	---	---	---	---	---	---	.00	.00	11	.0
6	---	---	---	---	---	---	---	---	.00	.00	96	.00
7	---	---	---	---	---	---	---	---	.00	.00	1.2	.00
8	---	---	---	---	---	---	---	---	.00	.00	.07	.00
9	---	---	---	---	---	---	---	---	1.2	.00	.00	.00
10	---	---	---	---	---	---	---	---	.06	.00	.00	.00
11	---	---	---	---	---	---	---	.70	.00	30	.00	.00
12	---	---	---	---	---	---	---	.33	.00	1.9	.00	.42
13	---	---	---	---	---	---	---	.07	.00	.32	.00	.27
14	---	---	---	---	---	---	---	.01	.00	.00	.00	.00
15	---	---	---	---	---	---	---	.0	.00	.00	.00	.00
16	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
17	---	---	---	---	---	---	---	2.6	.00	.00	.00	.00
18	---	---	---	---	---	---	---	.37	.00	.00	.00	.00
19	---	---	---	---	---	---	---	.0	.00	8.9	28	.00
20	---	---	---	---	---	---	---	.0	.00	226	1.2	.00
21	---	---	---	---	---	---	---	.00	.00	25	.05	.00
22	---	---	---	---	---	---	---	.00	.00	2.3	.00	.00
23	---	---	---	---	---	---	---	.00	.00	.28	14	.00
24	---	---	---	---	---	---	---	4.1	.00	.0	2.2	.00
25	---	---	---	---	---	---	---	1.3	.00	.00	.14	.43
26	---	---	---	---	---	---	---	.26	.00	.00	.00	.0
27	---	---	---	---	---	---	---	.01	.00	.00	.00	.00
28	---	---	---	---	---	---	---	.00	.00	.00	.00	.00
29	---	---	---	---	---	---	---	.00	.00	.00	.27	.00
30	---	---	---	---	---	---	---	.00	.00	.00	.23	.00
31	---	---	---	---	---	---	---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	---	---	1.26	294.70	154.36	2.01
MEAN	---	---	---	---	---	---	---	---	.042	9.51	4.98	.067
MAX	---	---	---	---	---	---	---	---	1.2	226	96	.65
MIN	---	---	---	---	---	---	---	---	.00	.00	.00	.00

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.46	11	2.3	4.5	14	3.0	.24	.13	7.5	.42
2	.67	.00	.37	3.8	67	3.6	6.4	2.4	.22	.74	1.9	2.1
3	.23	.00	.29	2.7	378	2.9	224	2.1	10	23	1.3	6.2
4	.0	24	.29	1.9	34	11	190	1.9	53	3.9	.94	3.5
5	.00	7.7	.17	12	13	45	98	21	38	2.4	.82	1.8
6	.00	.46	.21	61	8.0	110	45	13	2.3	1.7	45	.80
7	.00	.19	.18	14	3.6	44	34	4.1	1.0	1.5	2.9	.37
8	.00	.01	.05	150	2.1	21	41	2.9	.55	.59	1.3	.16
9	.00	.0	.01	5.9	1.1	16	8.0	138	33	.47	.78	.45
10	.00	18	.01	3.7	1.3	12	3.7	11	2.1	.39	.46	1.9
11	.00	.78	.01	15	1.6	9.8	2.6	3.5	.65	22	.35	9.2
12	.00	.23	.01	35	2.0	7.7	2.7	1.9	66	8.3	.35	4.6
13	.00	.45	.05	8.3	451	25	2.6	1.5	8.3	1.3	.35	2.4
14	.00	.32	.14	184	392	11	2.4	1.3	46	.76	.29	3.2
15	.00	.01	.08	29	430	4.1	2.6	5.9	7.8	.26	.33	4.5
16	.00	.0	.02	7.4	150	3.8	2.9	1.5	14	.15	.33	2.9
17	.00	.12	.01	5.1	48	3.7	2.8	.93	1.9	.11	.36	1.5
18	.00	.0	.01	4.3	29	4.0	2.7	.70	.91	.08	.34	.71
19	.00	111	.17	3.4	20	3.8	10	.58	.61	528	.39	.56
20	.00	177	.25	3.0	52	118	4.2	48	.62	43	.57	.43
21	.19	3.2	14	2.5	180	64	3.7	2.3	1.1	4.5	17	.36
22	.18	1.0	.90	2.3	90	5.6	3.1	1.7	.53	2.5	5.1	.26
23	3.1	.56	25	2.3	36	2.9	3.0	6.4	.35	1.3	25	.33
24	1.2	.42	82	2.2	14	2.0	3.3	2.2	.76	.89	8.0	.30
25	.02	.36	3.7	2.0	9.1	1.5	3.4	1.3	.45	.69	3.0	.18
26	.00	36	1.2	6.2	8.0	1.1	2.7	28	.38	.41	1.5	.14
27	.00	25	.99	4.3	6.7	2.2	15	2.9	.24	.27	.70	.10
28	.00	1.8	261	3.0	5.6	1.8	4.4	1.3	.22	.25	.30	.10
29	.00	.76	7.6	2.7	---	51	7.7	.76	.20	.23	.18	.11
30	.00	.59	3.5	2.8	---	44	4.3	.45	.16	2.4	.14	.11
31	.00	---	2.6	2.5	---	177	---	.25	---	77	.10	---
TOTAL	5.61	409.96	405.28	593.3	2435.4	814.0	750.2	312.77	291.59	729.22	127.58	49.69
MEAN	.18	13.7	13.1	19.1	87.0	26.3	25.0	10.1	9.72	23.5	4.12	1.66
MAX	3.1	177	261	184	451	177	224	138	66	528	45	9.2
MIN	.00	.00	.01	1.9	1.1	1.1	2.4	.25	.16	.08	.10	.10

WTR YR 1989 TOTAL 6924.60 MEAN 19.0 MAX 528 MIN .00

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1988 to current year.
pH: May 1988 to current year.
WATER TEMPERATURE: May 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1988.

REMARKS.--Water-quality samples collected biweekly. Records fair for specific conductance, pH, and water temperature.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel personnel.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,062 microsiemens, June 23, 1988; minimum, 101 microsiemens, Mar. 31 and Apr. 4, 1989.
pH: Maximum, 11.3 units, July 28, 29, 1989; minimum, 4.8 units, Sept. 12, 1988.
WATER TEMPERATURE: Maximum, 34.4°C, Sept. 21, 1989; minimum, 0.9°C, Dec. 11, 1989.
DISSOLVED OXYGEN: Maximum, 24.5 mg/L, Aug. 16, 1989; minimum, 1.2 mg/L, July 11, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 762 microsiemens, Dec. 12; minimum, 101 microsiemens, Mar. 31, Apr. 4.
pH: Maximum, 11.3 units, July 28, 29; minimum, 5.7 units, Mar. 15.
WATER TEMPERATURE: Maximum, 34.4°C, Sept. 21; minimum, 0.9°C, Dec. 11.
DISSOLVED OXYGEN: Maximum, 24.5 mg/L, Aug. 16; minimum, 1.2 mg/L, July 11.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)
NOV							
10...	1250	17	163	8.10	15.5	6.6	66
28...	1400	1.2	300	8.29	6.5	10.1	81
DEC							
08...	1355	0.02	686	9.11	5.5	15.1	118
22...	0850	1.2	288	7.90	5.5	8.8	69
JAN							
12...	1345	25	246	7.20	9.0	9.7	84
26...	1320	4.7	583	7.72	10.5	12.0	107
FEB							
09...	1300	0.95	583	7.78	0.0	16.0	107
MAR							
14...	1300	4.1	409	7.11	15.5	11.2	113
28...	1315	1.1	384	8.60	21.5	10.9	123
APR							
11...	1330	2.5	434	8.90	11.5	12.1	109
25...	1415	3.3	531	9.08	26.0	15.1	185
MAY							
09...	1320	551	108	7.30	15.5	8.0	80
23...	1345	4.7	316	7.40	22.0	6.9	78
JUN							
06...	1350	1.8	236	7.59	23.5	8.0	93
21...	1350	1.2	401	8.60	28.0	14.4	184
JUL							
05...	1335	1.9	329	7.20	26.0	9.6	116
18...	1400	0.02	345	9.09	27.5	14.3	180
AUG							
01...	1400	4.6	204	7.10	28.0	5.4	69
15...	1345	0.03	492	9.20	28.0	15.9	205
29...	1430	0.02	446	9.40	30.5	20.1	265
SEP							
08...	1400	0.14	407	9.40	30.5	21.9	289
27...	1340	0.05	585	9.60	18.5	18.9	198

MILL CREEK BASIN

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	517	461	490	468	240	313
2	---	---	---	---	---	---	530	431	472	328	276	297
3	---	---	---	---	---	---	522	481	506	482	431	460
4	---	---	---	---	---	---	544	520	532	507	483	494
5	---	---	---	---	---	---	670	543	636	524	371	502
6	---	---	---	---	---	---	686	664	674	311	173	215
7	---	---	---	---	---	---	687	675	683	329	223	279
8	---	---	---	---	---	---	693	684	689	233	125	188
9	---	---	---	---	---	---	699	692	695	306	234	271
10	---	---	---	---	---	---	739	699	711	318	219	248
11	---	---	---	---	---	---	759	705	731	294	201	259
12	---	---	---	---	---	---	762	665	684	290	190	230
13	---	---	---	---	---	---	691	669	681	304	206	254
14	---	---	---	---	---	---	758	660	703	305	218	266
15	---	---	---	---	---	---	733	723	729	318	222	272
16	---	---	---	---	---	---	755	656	734	329	231	273
17	---	---	---	---	---	---	751	655	714	455	272	320
18	---	---	---	---	---	---	752	702	724	513	456	489
19	---	---	---	---	---	---	703	685	695	556	515	538
20	---	---	---	---	---	---	684	649	670	562	463	507
21	---	---	---	---	---	---	548	260	356	500	481	494
22	---	---	---	---	---	---	319	120	310	523	499	516
23	---	---	---	---	---	---	321	117	175	554	525	544
24	---	---	---	---	---	---	279	160	214	567	545	560
25	---	---	---	---	---	---	338	268	303	587	565	576
26	---	---	---	---	---	---	340	242	266	606	383	517
27	---	---	---	---	---	---	439	278	309	422	387	408
28	---	---	---	---	---	---	312	156	224	423	397	403
29	---	---	---	290	220	250	319	256	289	535	184	475
30	---	---	---	459	293	412	334	237	276	581	539	564
31	---	---	---	---	---	---	518	305	404	589	582	586
MONTH	---	---	---	---	---	---	762	117	525	606	125	397

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	596	581	586	404	395	399	301	201	234	---	---	---
2	596	145	505	412	403	406	238	200	217	---	---	---
3	305	113	170	430	412	419	285	114	220	---	---	---
4	374	306	344	450	430	438	234	101	166	---	---	---
5	389	291	323	456	292	339	321	231	286	---	---	---
6	370	324	346	319	218	289	405	300	327	---	---	---
7	495	370	450	254	225	240	439	401	420	---	---	---
8	522	496	512	287	256	270	419	391	407	---	---	---
9	552	515	538	311	287	300	438	419	424	---	---	---
10	563	552	559	316	309	311	435	420	427	---	---	---
11	575	554	567	344	316	329	442	430	435	---	---	---
12	564	540	558	---	---	---	463	443	456	---	---	---
13	551	173	316	---	---	---	479	458	471	---	---	---
14	254	171	212	---	---	---	486	456	476	---	---	---
15	478	170	197	470	401	437	484	461	474	---	---	---
16	246	190	215	468	421	440	518	484	510	---	---	---
17	266	247	259	499	401	464	505	487	498	---	---	---
18	286	266	275	475	411	433	519	417	495	---	---	---
19	298	285	291	498	411	450	501	285	362	---	---	---
20	312	212	282	469	169	335	401	356	383	---	---	---
21	221	199	208	304	175	237	445	351	395	---	---	---
22	252	207	238	328	231	259	495	447	477	---	---	---
23	270	252	261	405	255	295	531	495	516	---	---	---
24	290	270	279	435	409	422	546	527	536	---	---	---
25	314	290	300	461	435	449	534	488	514	---	---	---
26	357	313	334	480	458	469	530	496	517	---	---	---
27	379	358	369	495	338	459	545	283	368	---	---	---
28	393	378	385	431	328	376	---	---	---	---	---	---
29	---	---	---	438	185	355	---	---	---	---	---	---
30	---	---	---	298	185	224	---	---	---	---	---	---
31	---	---	---	291	101	191	---	---	---	---	---	---
MONTH	596	113	353	---	---	---	---	---	---	---	---	---

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	658	348	552	---	---	---	508	330	457
2	---	---	---	715	332	565	---	---	---	399	201	329
3	---	---	---	716	229	318	---	---	---	276	224	251
4	---	---	---	316	234	275	338	305	322	307	276	290
5	---	---	---	354	321	334	405	267	361	427	305	340
6	---	---	---	348	319	326	438	225	359	592	370	426
7	---	---	---	608	350	514	413	214	318	599	346	516
8	---	---	---	591	365	458	273	235	250	551	503	530
9	---	---	---	367	323	349	298	274	291	520	380	493
10	---	---	---	335	309	323	329	299	312	495	213	265
11	---	---	---	337	154	310	339	329	334	232	224	228
12	---	---	---	326	126	294	385	338	358	261	232	248
13	---	---	---	159	131	148	415	385	399	365	258	289
14	---	---	---	177	159	169	424	410	420	375	264	322
15	---	---	---	184	172	178	651	410	582	399	202	349
16	---	---	---	187	166	176	657	400	587	293	208	257
17	---	---	---	182	169	175	401	362	377	311	294	306
18	---	---	---	---	---	---	398	372	379	363	311	338
19	---	---	---	---	---	---	664	400	517	376	360	365
20	---	---	---	399	289	347	685	665	675	454	378	434
21	---	---	---	380	317	355	740	247	523	443	420	432
22	442	387	429	380	364	371	435	238	369	458	387	449
23	440	420	433	616	378	469	270	248	260	565	396	528
24	710	427	625	660	616	638	439	240	289	590	544	568
25	709	651	682	673	318	538	266	244	253	573	531	542
26	660	417	564	319	291	305	303	267	279	592	574	584
27	427	413	419	300	285	296	368	303	328	600	579	591
28	430	418	425	286	273	280	427	369	396	597	573	582
29	639	419	453	286	266	279	648	428	453	643	599	618
30	656	636	648	290	199	247	490	455	474	684	645	660
31	---	---	---	209	143	176	490	460	479	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	684	201	420

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	9.0	8.9	8.9	7.1	6.8	7.0
2	---	---	---	---	---	---	9.3	9.0	9.1	7.1	6.8	7.0
3	---	---	---	---	---	---	9.4	9.1	9.2	7.2	6.8	7.1
4	---	---	---	---	---	---	9.5	9.3	9.4	7.1	6.8	7.0
5	---	---	---	---	---	---	9.7	8.7	9.5	7.0	6.8	6.9
6	---	---	---	---	---	---	9.7	8.7	8.9	7.1	6.7	7.0
7	---	---	---	---	---	---	9.8	8.8	9.0	6.9	6.6	6.8
8	---	---	---	---	---	---	9.8	8.9	9.1	7.6	6.6	6.8
9	---	---	---	---	---	---	9.9	8.9	9.7	7.6	6.6	7.1
10	---	---	---	---	---	---	10.7	9.4	9.8	7.6	6.6	7.4
11	---	---	---	---	---	---	9.9	9.1	9.7	8.6	6.6	6.9
12	---	---	---	---	---	---	9.9	9.3	9.7	7.5	6.6	7.0
13	---	---	---	---	---	---	9.9	7.7	9.5	7.4	7.2	7.3
14	---	---	---	---	---	---	9.2	7.6	8.6	7.3	6.9	7.2
15	---	---	---	---	---	---	7.8	7.0	7.5	7.1	6.8	7.0
16	---	---	---	---	---	---	7.8	7.1	7.5	7.2	7.1	7.2
17	---	---	---	---	---	---	7.5	7.3	7.5	7.3	7.1	7.2
18	---	---	---	---	---	---	8.9	7.3	7.7	7.3	7.1	7.2
19	---	---	---	---	---	---	8.8	7.3	7.7	7.3	7.1	7.2
20	---	---	---	---	---	---	7.5	7.1	7.3	7.2	7.1	7.2
21	---	---	---	---	---	---	7.5	6.9	7.2	7.2	7.1	7.2
22	---	---	---	---	---	---	7.7	6.9	7.1	8.2	7.0	7.3
23	---	---	---	---	---	---	7.4	6.8	7.2	8.1	6.9	7.3
24	---	---	---	---	---	---	7.4	6.9	7.1	8.1	6.8	7.1
25	---	---	---	---	---	---	7.3	6.8	7.1	8.5	6.7	7.5
26	---	---	---	---	---	---	7.7	6.7	7.0	8.4	7.7	8.1
27	---	---	---	---	---	---	7.7	6.8	7.0	8.1	7.7	7.9
28	---	---	---	---	---	---	7.2	6.8	7.1	8.3	7.9	8.1
29	---	---	---	8.7	8.4	8.6	7.2	6.7	7.0	8.3	8.0	8.1
30	---	---	---	8.9	8.6	8.8	7.2	6.7	7.0	8.5	7.9	8.1
31	---	---	---	---	---	---	7.2	6.8	7.0	8.6	8.1	8.4
MONTH	---	---	---	---	---	---	10.7	6.7	8.2	8.6	6.6	7.3

MILL CREEK BASIN

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.7	8.1	8.5	6.6	6.4	6.5	8.8	6.7	7.3	---	---	---
2	8.7	6.3	8.1	6.5	6.5	6.5	9.2	6.9	7.9	---	---	---
3	6.3	6.1	6.2	6.6	6.5	6.5	7.9	7.0	7.3	---	---	---
4	6.6	6.3	6.5	6.9	6.6	6.7	8.0	7.1	7.6	---	---	---
5	6.8	6.6	6.7	6.9	6.4	6.5	7.6	7.2	7.4	---	---	---
6	6.8	6.6	6.7	6.7	6.4	6.5	8.4	6.3	7.8	---	---	---
7	6.9	6.7	6.8	6.9	6.7	6.8	8.5	7.5	8.1	---	---	---
8	8.0	6.7	7.3	7.0	6.8	6.9	8.7	7.6	8.3	---	---	---
9	8.0	6.8	7.4	6.9	6.4	6.6	8.7	8.0	8.4	---	---	---
10	8.1	6.8	7.5	6.5	6.2	6.3	8.8	8.0	8.7	---	---	---
11	8.1	6.9	7.5	6.8	6.2	6.5	9.3	8.7	9.0	---	---	---
12	8.0	6.8	7.3	---	---	---	9.5	8.8	9.2	---	---	---
13	8.0	6.0	6.5	---	---	---	9.7	9.0	9.4	---	---	---
14	6.3	6.0	6.1	---	---	---	9.8	9.5	9.7	---	---	---
15	6.3	6.0	6.1	8.0	5.7	6.9	9.8	9.4	9.7	---	---	---
16	6.4	6.1	6.2	8.2	6.1	7.3	9.9	9.5	9.7	---	---	---
17	6.3	6.2	6.2	8.5	7.7	8.1	9.9	9.8	9.8	---	---	---
18	9.2	6.2	6.3	8.4	6.8	7.8	9.8	9.4	9.6	---	---	---
19	6.4	6.3	6.3	8.8	6.6	7.6	9.6	8.2	8.8	---	---	---
20	6.7	6.3	6.4	8.6	6.7	7.3	9.2	8.4	8.9	---	---	---
21	6.4	6.2	6.3	7.2	6.7	6.9	9.3	9.1	9.2	---	---	---
22	6.5	6.3	6.4	8.0	7.1	7.5	9.5	9.1	9.3	---	---	---
23	6.7	6.5	6.6	9.5	7.4	8.2	9.4	9.0	9.2	---	---	---
24	6.7	6.6	6.7	9.7	7.8	8.4	9.2	8.7	9.0	---	---	---
25	6.7	6.2	6.7	8.3	7.8	8.0	---	---	---	---	---	---
26	6.9	6.7	6.8	9.2	7.9	8.4	---	---	---	---	---	---
27	6.8	6.6	6.7	9.4	8.2	9.0	---	---	---	---	---	---
28	6.7	6.5	6.6	8.8	8.3	8.6	---	---	---	---	---	---
29	---	---	---	8.6	6.4	6.9	---	---	---	---	---	---
30	---	---	---	7.4	6.5	7.0	---	---	---	---	---	---
31	---	---	---	7.6	6.6	7.2	---	---	---	---	---	---
MONTH	9.2	6.0	6.8	---	---	---	---	---	---	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	9.2	7.3	8.4
2	---	---	---	---	---	---	---	---	---	8.0	7.1	7.6
3	---	---	---	---	---	---	---	---	---	8.8	7.6	8.1
4	---	---	---	---	---	---	8.9	8.1	8.6	9.6	8.2	8.8
5	---	---	---	---	---	---	8.9	8.3	8.6	9.6	8.6	9.1
6	---	---	---	---	---	---	8.8	6.8	7.2	9.6	8.8	9.2
7	---	---	---	---	---	---	7.4	6.8	7.0	10.0	8.9	9.5
8	---	---	---	---	---	---	7.6	6.9	7.2	10.0	9.5	9.8
9	---	---	---	---	---	---	7.8	7.2	7.5	10.0	8.7	9.7
10	---	---	---	---	---	---	7.8	7.3	7.6	9.4	7.7	8.2
11	---	---	---	---	---	---	8.3	7.7	7.9	9.5	7.7	8.3
12	---	---	---	---	---	---	8.3	7.9	8.1	9.6	8.0	8.9
13	---	---	---	---	---	---	8.3	8.0	8.2	9.8	8.1	9.2
14	---	---	---	---	---	---	8.4	7.9	8.1	9.6	7.7	8.6
15	---	---	---	---	---	---	8.4	7.8	8.0	7.7	7.6	7.6
16	---	---	---	---	---	---	8.4	7.8	8.1	8.2	7.6	7.8
17	---	---	---	---	---	---	8.5	8.1	8.3	8.6	7.7	8.1
18	---	---	---	---	---	---	8.2	7.8	8.0	9.1	7.9	8.5
19	---	---	---	---	---	---	8.2	7.4	7.8	9.6	8.6	9.1
20	---	---	---	7.2	6.6	7.0	7.9	7.4	7.7	9.6	8.6	9.2
21	---	---	---	7.4	7.1	7.2	7.4	6.5	7.0	10.3	9.4	9.7
22	---	---	---	8.0	6.0	7.2	7.8	6.4	6.9	10.0	9.2	9.7
23	---	---	---	6.4	6.0	6.2	7.8	6.6	7.1	10.0	8.4	9.3
24	---	---	---	8.0	6.0	7.0	7.4	6.5	6.9	9.9	8.7	9.5
25	---	---	---	10.8	6.0	8.3	7.5	6.5	6.8	9.8	9.2	9.6
26	---	---	---	11.0	10.6	10.7	7.7	6.7	7.1	9.6	8.9	9.2
27	---	---	---	11.1	10.7	10.8	7.8	6.4	7.1	9.6	9.2	9.4
28	---	---	---	11.3	11.0	11.1	7.6	6.7	7.2	9.6	9.4	9.5
29	---	---	---	11.3	10.8	11.0	9.4	7.0	8.1	9.4	8.7	9.2
30	---	---	---	11.1	7.1	9.8	9.3	8.6	9.0	8.8	8.6	8.7
31	---	---	---	7.1	6.8	7.0	9.4	8.7	9.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	10.3	7.1	8.9

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	4.9	3.2	3.9	9.1	7.0	8.2
2	---	---	---	---	---	---	4.5	2.4	3.5	7.9	7.6	7.7
3	---	---	---	---	---	---	5.7	3.2	4.5	8.8	6.9	7.9
4	---	---	---	---	---	---	4.9	3.5	4.1	8.2	6.1	7.0
5	---	---	---	---	---	---	5.1	3.5	4.1	9.3	6.1	7.3
6	---	---	---	---	---	---	5.7	3.5	4.4	11.5	9.0	10.4
7	---	---	---	---	---	---	6.7	4.3	5.5	18.3	10.5	12.7
8	---	---	---	---	---	---	6.0	4.1	5.0	18.0	10.0	13.2
9	---	---	---	---	---	---	5.7	2.3	3.7	9.9	8.3	9.2
10	---	---	---	---	---	---	4.2	2.0	2.9	10.5	7.1	8.6
11	---	---	---	---	---	---	4.0	.9	2.3	10.8	6.0	8.6
12	---	---	---	---	---	---	3.7	1.4	2.3	9.2	6.8	8.4
13	---	---	---	---	---	---	3.5	2.2	2.8	9.9	5.0	6.5
14	---	---	---	---	---	---	5.9	2.7	4.2	9.7	8.1	8.8
15	---	---	---	---	---	---	7.2	3.0	4.5	9.6	9.2	9.4
16	---	---	---	---	---	---	5.5	2.2	3.6	9.9	5.0	8.1
17	---	---	---	---	---	---	5.6	2.9	3.7	9.8	4.9	8.1
18	---	---	---	---	---	---	4.2	2.6	3.3	9.0	4.9	7.4
19	---	---	---	---	---	---	5.8	3.1	4.6	9.8	4.9	7.7
20	---	---	---	---	---	---	8.9	5.3	7.3	9.8	4.9	8.6
21	---	---	---	---	---	---	11.6	8.5	10.5	9.0	6.5	7.8
22	---	---	---	---	---	---	11.8	8.0	8.7	9.4	4.9	7.5
23	---	---	---	---	---	---	12.8	10.2	11.6	9.7	6.5	8.2
24	---	---	---	---	---	---	13.3	10.3	12.0	9.8	4.9	7.8
25	---	---	---	---	---	---	11.3	7.7	9.6	9.8	4.9	5.4
26	---	---	---	---	---	---	7.6	5.9	6.8	9.5	4.8	5.9
27	---	---	---	---	---	---	12.3	6.1	8.8	9.0	5.6	7.4
28	---	---	---	---	---	---	12.0	6.0	8.8	9.7	4.9	7.5
29	---	---	---	5.9	3.3	4.7	6.1	4.1	5.3	8.0	7.1	7.6
30	---	---	---	5.2	3.6	4.6	7.0	5.0	6.0	8.9	7.2	8.1
31	---	---	---	---	---	---	7.5	4.9	6.3	10.0	5.0	7.6
MONTH	---	---	---	---	---	---	13.3	.9	5.6	18.3	4.8	8.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.9	7.5	9.9	7.2	2.4	4.9	17.6	8.7	12.8	---	---	---
2	11.0	7.7	9.8	7.2	2.4	5.0	17.6	12.9	14.8	---	---	---
3	9.1	4.4	7.0	9.7	3.8	6.5	17.3	12.5	13.7	---	---	---
4	8.2	7.1	7.6	12.4	7.6	10.0	17.3	12.4	14.9	---	---	---
5	7.6	6.5	7.1	11.7	2.5	9.4	17.1	12.2	13.2	---	---	---
6	7.1	4.5	5.8	7.9	5.2	6.5	13.1	11.8	12.6	---	---	---
7	7.0	4.5	5.6	5.8	3.6	4.9	16.4	6.3	13.5	---	---	---
8	7.5	4.6	5.8	9.5	4.0	6.5	13.1	10.1	11.5	---	---	---
9	7.0	4.5	5.6	8.9	6.7	7.7	12.3	6.0	9.0	---	---	---
10	7.6	4.5	6.0	9.0	7.5	8.2	12.4	6.9	10.1	---	---	---
11	8.3	4.8	6.5	14.0	9.0	11.3	13.8	5.9	10.2	---	---	---
12	8.3	5.0	6.7	---	---	---	15.7	6.8	11.1	---	---	---
13	8.5	3.7	6.3	---	---	---	18.1	9.9	13.7	---	---	---
14	4.4	3.6	4.0	---	---	---	15.3	10.9	13.4	---	---	---
15	8.4	3.5	5.8	16.0	12.6	14.6	15.7	12.5	13.8	---	---	---
16	8.4	3.5	5.7	16.8	4.5	11.1	20.1	10.9	15.3	---	---	---
17	5.3	3.9	4.5	16.8	5.8	11.6	21.0	14.8	17.9	---	---	---
18	3.8	3.4	3.6	17.4	12.1	14.3	23.3	16.1	19.7	---	---	---
19	8.2	3.3	4.3	15.9	9.5	12.7	21.2	14.7	18.1	---	---	---
20	5.6	3.7	4.2	13.4	10.9	11.9	22.6	14.2	18.3	---	---	---
21	5.7	4.2	5.4	15.0	9.8	11.5	24.1	16.1	20.0	---	---	---
22	8.0	3.1	5.9	19.5	12.7	15.4	23.4	18.1	21.1	---	---	---
23	7.0	5.1	5.9	16.0	10.6	13.5	21.9	17.8	19.2	---	---	---
24	6.3	5.0	5.7	19.0	13.7	15.2	23.4	16.1	19.1	---	---	---
25	7.1	5.3	6.2	18.6	12.0	15.1	26.6	19.8	22.0	---	---	---
26	7.8	2.9	5.7	21.1	13.0	17.0	25.7	18.3	21.8	---	---	---
27	7.4	2.6	4.9	20.4	15.1	17.8	25.3	17.9	21.5	---	---	---
28	7.3	2.6	5.5	22.0	17.3	19.7	---	---	---	---	---	---
29	---	---	---	19.7	13.9	17.3	---	---	---	---	---	---
30	---	---	---	18.1	13.6	14.6	---	---	---	---	---	---
31	---	---	---	17.8	10.1	13.9	---	---	---	---	---	---
MONTH	11.9	2.6	6.0	---	---	---	---	---	---	---	---	---

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	27.3	24.3	25.8	---	---	---	28.9	25.4	27.1
2	---	---	---	25.2	20.6	23.2	---	---	---	30.4	24.9	27.2
3	---	---	---	23.9	20.5	22.1	---	---	---	28.7	24.8	27.0
4	---	---	---	27.6	22.9	24.7	32.5	27.5	30.2	29.2	23.8	26.4
5	---	---	---	28.0	23.4	25.5	32.6	26.7	30.4	31.4	26.2	28.6
6	---	---	---	31.1	24.0	27.5	29.2	24.0	26.3	31.8	27.0	29.5
7	28.2	18.6	23.4	32.4	25.8	29.1	27.6	22.6	25.0	32.3	28.1	30.2
8	24.9	20.9	23.2	33.1	26.7	30.0	27.4	20.7	24.1	32.9	29.0	31.0
9	---	---	---	33.4	27.6	30.6	27.1	21.5	24.4	33.4	29.7	31.4
10	---	---	---	33.7	27.8	30.8	26.7	21.8	24.2	30.7	27.5	30.0
11	---	---	---	33.9	24.9	29.9	26.9	22.5	24.7	32.7	28.4	30.3
12	---	---	---	31.0	24.3	26.8	27.0	23.1	25.2	32.3	28.0	30.2
13	---	---	---	28.6	25.4	26.8	28.0	23.1	25.5	32.2	26.6	29.8
14	---	---	---	30.2	23.0	26.4	30.0	23.7	26.4	31.4	28.3	29.7
15	---	---	---	27.6	22.5	25.5	29.4	25.3	27.6	28.2	26.5	27.2
16	---	---	---	30.0	21.8	25.5	28.9	25.7	27.4	29.9	15.9	22.8
17	---	---	---	30.3	21.3	25.6	27.6	25.3	26.6	30.9	16.4	25.2
18	---	---	---	---	---	---	26.6	24.2	25.4	31.2	15.9	26.2
19	---	---	---	---	---	---	28.2	22.9	25.5	31.8	16.8	27.2
20	---	---	---	25.8	21.5	23.4	27.8	25.0	26.3	31.2	17.1	27.6
21	---	---	---	27.7	23.0	25.2	26.5	23.8	25.4	34.4	29.6	31.7
22	29.9	20.0	24.4	30.5	23.8	26.9	32.0	25.0	28.1	33.7	31.7	32.6
23	33.3	26.7	29.9	32.0	26.0	28.6	31.1	27.9	29.6	31.7	16.8	23.9
24	31.7	25.7	29.2	31.5	27.0	29.1	30.2	24.7	28.1	18.2	13.9	16.2
25	32.8	26.9	30.0	32.3	26.8	29.7	29.9	27.3	28.5	17.2	15.3	16.2
26	33.3	27.4	30.5	31.1	27.7	29.5	30.9	27.4	28.9	30.6	15.3	18.8
27	31.7	28.3	29.8	30.5	27.6	29.1	31.5	27.5	29.4	18.6	14.8	16.4
28	30.7	26.6	28.3	31.6	27.4	29.2	32.0	27.9	29.9	18.5	13.4	15.8
29	30.4	24.7	27.6	30.2	25.6	28.0	30.8	28.8	29.9	18.8	17.0	17.8
30	30.2	22.8	26.8	28.4	24.3	26.2	29.6	26.6	28.3	19.6	18.2	18.8
31	---	---	---	27.2	23.7	25.5	29.5	26.2	27.9	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	34.4	13.4	25.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	---	---	---	12.9	10.3	11.3	11.1	9.3	10.7
2	---	---	---	---	---	---	13.5	10.2	11.5	11.0	10.6	10.8
3	---	---	---	---	---	---	13.5	10.0	11.4	11.2	9.2	10.2
4	---	---	---	---	---	---	13.6	10.1	11.7	9.8	9.3	9.6
5	---	---	---	---	---	---	14.1	10.4	12.6	11.1	9.3	9.8
6	---	---	---	---	---	---	14.8	10.9	13.3	10.9	10.1	10.5
7	---	---	---	---	---	---	15.4	11.0	13.1	10.6	6.8	10.0
8	---	---	---	---	---	---	15.4	10.7	12.7	10.2	6.7	8.6
9	---	---	---	---	---	---	14.2	10.4	12.5	11.1	9.1	10.5
10	---	---	---	---	---	---	18.3	11.0	14.6	11.0	9.1	10.0
11	---	---	---	---	---	---	17.6	13.9	15.3	11.1	9.1	9.7
12	---	---	---	---	---	---	19.5	14.3	17.7	10.1	8.0	9.6
13	---	---	---	---	---	---	18.1	14.4	16.3	10.2	8.0	9.1
14	---	---	---	---	---	---	15.2	13.4	14.2	10.9	9.5	10.1
15	---	---	---	---	---	---	15.4	13.5	14.3	10.9	10.1	10.5
16	---	---	---	---	---	---	18.3	13.6	15.9	12.1	10.8	11.4
17	---	---	---	---	---	---	19.1	13.7	16.5	12.8	11.4	12.1
18	---	---	---	---	---	---	19.2	14.0	16.8	13.1	11.9	12.5
19	---	---	---	---	---	---	18.3	13.8	16.4	13.5	12.4	13.0
20	---	---	---	---	---	---	15.3	11.4	14.2	14.4	12.9	13.7
21	---	---	---	---	---	---	11.3	6.8	9.2	17.6	14.0	15.6
22	---	---	---	---	---	---	10.0	6.7	8.3	18.8	15.2	17.4
23	---	---	---	---	---	---	9.8	6.8	7.5	19.5	15.9	18.2
24	---	---	---	---	---	---	9.9	7.0	8.4	19.7	16.2	17.8
25	---	---	---	---	---	---	10.7	9.3	10.1	20.5	9.4	15.1
26	---	---	---	---	---	---	11.2	10.4	10.8	10.6	8.3	9.3
27	---	---	---	---	---	---	11.3	9.3	10.3	15.0	8.8	10.7
28	---	---	---	---	---	---	11.3	9.3	10.8	11.9	9.4	10.7
29	---	---	---	10.4	8.5	9.2	10.3	9.3	9.9	11.6	10.4	11.1
30	---	---	---	10.5	9.0	9.7	10.0	9.6	9.8	13.1	6.7	12.3
31	---	---	---	---	---	---	10.1	9.4	9.8	13.6	8.2	11.6
MONTH	---	---	---	---	---	---	19.5	6.7	12.5	20.5	6.7	11.7

03294550 MILL CREEK CUTOFF NEAR LOUISVILLE, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.7	7.9	11.5	9.8	6.3	7.8	---	---	---	---	---	---
2	12.8	8.1	10.2	10.2	9.2	9.6	---	---	---	---	---	---
3	9.8	7.9	8.6	10.5	7.1	9.6	---	---	---	---	---	---
4	9.4	8.5	8.9	10.5	6.4	8.8	---	---	---	---	---	---
5	9.8	8.9	9.2	10.6	6.7	9.5	---	---	---	---	---	---
6	12.7	9.0	10.9	11.2	10.6	11.0	---	---	---	---	---	---
7	13.1	9.6	11.7	11.4	9.4	10.5	---	---	---	---	---	---
8	13.1	10.0	12.4	11.4	9.5	10.7	---	---	---	---	---	---
9	13.9	12.6	13.3	10.9	5.8	7.0	---	---	---	---	---	---
10	13.6	12.6	13.2	7.5	5.6	6.8	---	---	---	---	---	---
11	13.3	12.2	12.8	11.0	5.5	7.9	---	---	---	---	---	---
12	13.0	9.7	11.5	---	---	---	---	---	---	---	---	---
13	12.6	8.5	9.4	---	---	---	---	---	---	---	---	---
14	8.5	8.3	8.4	---	---	---	---	---	---	---	---	---
15	10.4	8.4	8.9	15.3	7.2	10.8	---	---	---	---	---	---
16	10.3	8.4	9.0	15.2	6.8	11.5	---	---	---	---	---	---
17	9.6	6.3	8.1	14.8	9.2	12.1	---	---	---	---	---	---
18	8.7	6.2	8.0	13.1	6.0	9.3	---	---	---	---	---	---
19	9.9	5.7	6.7	14.3	6.1	10.3	---	---	---	---	---	---
20	10.4	5.9	8.6	10.4	6.0	9.1	---	---	---	---	---	---
21	10.3	9.9	10.0	10.1	8.1	9.2	---	---	---	---	---	---
22	10.2	6.6	9.5	12.3	8.0	9.8	---	---	---	---	---	---
23	10.8	8.8	10.2	13.6	7.6	10.0	---	---	---	---	---	---
24	10.8	6.5	9.4	13.4	5.2	9.7	---	---	---	---	---	---
25	10.1	6.6	9.0	17.0	3.6	9.9	---	---	---	---	---	---
26	10.4	9.0	9.8	16.8	3.4	10.7	---	---	---	---	---	---
27	9.9	6.4	8.1	12.4	2.9	8.1	---	---	---	---	---	---
28	9.9	5.9	7.4	13.6	3.0	7.1	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	13.9	5.7	9.8	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	12.7	6.8	9.2
2	---	---	---	---	---	---	---	---	---	11.6	5.8	8.2
3	---	---	---	---	---	---	---	---	---	14.7	5.3	9.8
4	---	---	---	---	---	---	15.9	6.6	10.1	21.8	10.5	14.5
5	---	---	---	---	---	---	11.9	6.9	9.1	22.6	11.3	16.5
6	---	---	---	---	---	---	8.5	5.1	7.3	22.6	10.7	15.7
7	---	---	---	---	---	---	11.1	3.7	7.7	22.6	9.7	14.9
8	---	---	---	---	---	---	13.0	6.6	9.4	22.4	9.0	14.1
9	---	---	---	---	---	---	13.7	8.8	11.3	22.2	8.2	13.3
10	---	---	---	---	---	---	19.0	9.2	12.0	12.0	5.6	8.6
11	---	---	---	---	---	---	19.9	9.1	12.7	14.1	8.4	10.6
12	---	---	---	---	---	---	14.8	8.9	12.2	20.7	7.5	13.1
13	---	---	---	---	---	---	19.7	9.9	13.0	20.0	6.1	13.4
14	---	---	---	---	---	---	21.2	9.7	13.7	14.0	6.7	9.7
15	---	---	---	---	---	---	24.0	11.9	16.6	6.1	2.1	2.6
16	---	---	---	---	---	---	24.5	11.4	17.0	13.1	6.5	10.2
17	---	---	---	---	---	---	16.7	9.9	13.7	13.7	6.0	9.2
18	---	---	---	---	---	---	17.2	9.2	12.7	20.7	7.4	13.9
19	---	---	---	---	---	---	17.6	10.2	13.8	21.9	9.9	16.4
20	---	---	---	---	---	---	22.2	14.2	16.3	21.8	10.3	17.5
21	---	---	---	---	---	---	16.4	11.1	13.5	21.7	10.2	18.3
22	---	---	---	---	---	---	17.3	10.4	13.4	21.6	10.2	14.6
23	---	---	---	---	---	---	18.8	10.3	13.7	21.6	5.8	14.2
24	---	---	---	---	---	---	18.2	10.6	13.8	21.6	9.2	16.0
25	---	---	---	---	---	---	20.0	10.2	14.1	21.5	10.8	17.1
26	---	---	---	---	---	---	20.2	13.2	16.5	21.5	9.5	16.2
27	---	---	---	---	---	---	20.6	13.3	17.3	21.2	9.4	13.2
28	---	---	---	---	---	---	20.9	13.3	17.6	19.4	9.6	14.0
29	---	---	---	---	---	---	20.1	11.4	15.6	13.4	9.5	11.4
30	---	---	---	---	---	---	19.3	6.4	11.0	11.7	8.9	10.1
31	---	---	---	---	---	---	19.6	5.7	10.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	22.6	2.1	12.9

MILL CREEK BASIN

03294570 MILL CREEK AT ORELL ROAD NEAR LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°04'41", long 85°53'24", Jefferson County, Hydrologic Unit 05140101, at culvert on Orell Road, and at mile 1.5.

DRAINAGE AREA.-- 13.5 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
14...	0940	0.13	567	8.10	7.0	8.4	79
27...	0900	0.40	483	7.90	5.0	7.7	60
NOV							
10...	1000	18	160	7.90	12.5	8.9	83
28...	1130	5.7	148	8.35	6.0	8.4	67
DEC							
08...	1030	0.27	400	9.05	4.5	11.1	85
22...	0955	3.9	408	7.90	6.5	9.3	75
JAN							
12...	1115	31	145	7.35	8.5	9.9	84
26...	1010	2.4	483	7.69	9.5	10.3	90
FEB							
09...	1000	2.4	305	7.85	0.0	12.7	84
MAR							
14...	1000	8.0	338	7.41	12.0	10.3	97
28...	1050	2.2	438	7.60	17.5	10.2	106
APR							
11...	1050	5.5	295	7.80	9.0	9.9	84
25...	1110	1.7	589	7.81	19.5	8.4	90
MAY							
09...	1035	29	319	7.80	14.5	8.2	80
23...	1100	4.4	364	7.60	19.0	6.0	64
JUN							
06...	1050	5.8	278	7.69	19.5	6.1	65
JUL							
05...	1105	5.1	195	7.60	24.0	8.2	96
18...	1030	1.4	675	7.64	22.0	7.7	87
AUG							
01...	1100	26	150	7.30	24.5	--	--
15...	1045	0.88	702	8.00	22.0	6.6	76
29...	1100	1.3	714	7.98	27.5	6.2	78
SEP							
08...	1100	1.4	645	7.59	25.0	5.9	71
27...	1045	1.3	643	8.20	13.5	--	--

03295400 SALT RIVER AT GLENSBORO, KY

LOCATION.--Lat 38°00'07", long 85°03'38", Anderson County, Hydrologic Unit 05140102, on downstream left side of stream at bridge on Highway 53 at Glensboro, 0.9 mi upstream from Timber Creek, 2.0 mi downstream from Indian Creek and at mile 82.5.

DRAINAGE AREA.--172 mi^2.

PERIOD OF RECORD.--May to September 1989.

GAGE.--Water-stage recorder. Datum of gage undetermined.

REMARKS.--Estimated daily discharges: June 21 to July 9, Aug. 1-14, 22, 23, and Aug. 26 to Sept. 6. Records good except those for estimated daily discharges which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge greater than 10,000 ft^3/s, gage height greater than 10.5 ft, February flood, 1989, from discharge measurement made February 14, 1989.

EXTREMES FOR CURRENT PERIOD.--May to September 1989: Maximum discharge, 2,870 ft^3/s, June 15, gage height 6.85 ft; minimum daily discharge, 4.0 ft^3/s, Aug. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	55	150	45	8.6
2	---	---	---	---	---	---	---	---	46	94	120	14
3	---	---	---	---	---	---	---	---	41	300	70	26
4	---	---	---	---	---	---	---	32	63	1300	35	37
5	---	---	---	---	---	---	---	51	355	760	21	27
6	---	---	---	---	---	---	---	59	161	380	34	22
7	---	---	---	---	---	---	---	49	83	210	54	18
8	---	---	---	---	---	---	---	46	50	120	88	16
9	---	---	---	---	---	---	---	636	52	60	52	14
10	---	---	---	---	---	---	---	1090	54	34	28	18
11	---	---	---	---	---	---	---	305	39	29	15	21
12	---	---	---	---	---	---	---	201	36	25	8.0	16
13	---	---	---	---	---	---	---	162	303	123	4.0	15
14	---	---	---	---	---	---	---	134	801	40	5.2	14
15	---	---	---	---	---	---	---	126	1520	22	22	21
16	---	---	---	---	---	---	---	132	1640	17	26	106
17	---	---	---	---	---	---	---	101	510	13	189	103
18	---	---	---	---	---	---	---	76	310	12	239	36
19	---	---	---	---	---	---	---	60	225	47	184	45
20	---	---	---	---	---	---	---	736	109	475	78	29
21	---	---	---	---	---	---	---	343	630	193	260	22
22	---	---	---	---	---	---	---	211	420	62	89	246
23	---	---	---	---	---	---	---	703	320	33	42	1360
24	---	---	---	---	---	---	---	365	210	24	31	692
25	---	---	---	---	---	---	---	230	150	19	21	303
26	---	---	---	---	---	---	---	277	100	16	18	191
27	---	---	---	---	---	---	---	191	74	15	16	126
28	---	---	---	---	---	---	---	172	200	14	14	74
29	---	---	---	---	---	---	---	131	450	13	12	53
30	---	---	---	---	---	---	---	96	240	12	11	48
31	---	---	---	---	---	---	---	70	---	11	10	---
TOTAL	---	---	---	---	---	---	---	---	9247	4623	1841.2	3721.6
MEAN	---	---	---	---	---	---	---	---	308	149	59.4	124
MAX	---	---	---	---	---	---	---	---	1640	1300	260	1360
MIN	---	---	---	---	---	---	---	---	36	11	4.0	8.6
CFSM	---	---	---	---	---	---	---	---	1.79	.87	.35	.72
IN.	---	---	---	---	---	---	---	---	2.00	1.00	.40	.80

03295890 BRASHEARS CREEK AT TAYLORSVILLE, KY

LOCATION.--Lat 38°02'13", long 85°20'27", Spencer County, Hydrologic Unit 05140102, on left bank at downstream side of bridge on State Highway 155, at the north edge of Taylorsville, 1.2 mi upstream from Salt River, and at mile 1.2.

DRAINAGE AREA.--259 mi^2.

PERIOD OF RECORD.--July 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 466.85 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: July 4, 19, 20. Records good except those for estimated daily discharges which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--8 years, 287 ft^3/s, 15.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s, May 2, 1983, gage height, 25.07 ft; no flow in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	1900	5,600	14.87	Apr. 4	1900	8,830	17.73
Feb. 15	2100	*13,500	*21.16	Apr. 27	0300	5,950	15.21
Mar. 6	1000	5,690	14.96				

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.0	67	531	160	296	1890	181	49	45	21	8.2
2	.07	.00	57	459	147	249	1130	139	39	32	18	6.2
3	.05	.00	49	383	3370	225	934	117	33	34	16	5.8
4	.04	.06	44	318	2630	202	5110	101	31	896	15	6.0
5	.03	.16	40	254	1330	2210	1980	108	34	546	14	5.3
6	.02	3.6	37	616	933	4540	1140	140	86	264	12	6.2
7	.02	15	34	926	673	1810	1010	144	106	143	699	5.4
8	.01	8.2	31	1760	486	1110	949	115	65	83	286	4.1
9	.00	6.6	29	1200	334	834	1090	414	53	231	139	3.4
10	.00	7.2	27	792	309	653	871	1250	85	96	80	12
11	.00	5.3	26	586	277	525	691	650	86	70	52	13
12	.00	4.2	22	1970	205	418	536	373	53	115	37	10
13	.00	3.8	23	1540	1230	355	409	261	387	93	28	14
14	.00	4.7	22	1600	10100	352	315	206	255	42	22	8.5
15	.00	3.8	21	3360	9950	293	280	202	192	29	17	7.1
16	.00	2.8	20	1440	8420	232	240	188	321	23	14	6.6
17	.00	1.9	20	971	2220	203	196	150	280	17	12	6.0
18	.00	11	18	725	1320	214	170	122	197	12	11	5.0
19	.00	624	19	543	966	150	192	99	130	141	15	4.4
20	.00	937	19	403	867	248	182	156	156	2290	15	6.1
21	.00	260	24	309	3480	1530	141	297	186	667	19	6.2
22	.00	132	52	248	1970	1080	121	194	128	310	13	14
23	.0	87	634	216	1170	785	106	167	91	175	67	71
24	.01	67	2850	190	862	604	95	228	67	112	84	60
25	.01	55	1170	169	701	454	91	175	54	81	37	47
26	.00	78	638	160	506	353	150	144	44	62	40	32
27	.0	182	443	218	466	283	3040	239	34	47	35	35
28	.01	152	2040	210	369	239	474	155	28	38	48	23
29	.01	106	1440	188	---	245	287	101	24	31	35	17
30	.0	82	901	181	---	857	218	78	80	25	20	15
31	.00	---	668	176	---	2680	---	62	---	24	13	---
TOTAL	0.36	2840.32	11485	22642	55541	24229	24038	6956	3374	6774	1934	463.5
MEAN	.012	94.7	370	730	1984	782	801	224	112	219	62.4	15.4
MAX	.08	937	2850	3360	10100	4540	5110	1250	387	2290	699	71
MIN	.00	.00	18	160	147	150	91	62	24	12	11	3.4
CFSM	.00	.37	1.43	2.82	7.66	3.02	3.09	.87	.43	.84	.24	.06
IN.	.00	.41	1.65	3.25	7.98	3.48	3.45	1.00	.48	.97	.28	.07

CAL YR 1988 TOTAL 83654.88 MEAN 229 MAX 8000 MIN .00 CFSM .88 IN. 12.02
WTR YR 1989 TOTAL 160277.18 MEAN 439 MAX 10100 MIN .00 CFSM 1.70 IN. 23.02

03297845 FLOYDS FORK NEAR CRESTWOOD, KY

LOCATION.--Lat 38°17'55", long 85°25'36", Shelby County, Hydrologic Unit 05140101, on left bank at upstream side of bridge on State Highway 1408, 3 mi southeast of Crestwood, 2.8 mi upstream from Curry's Fork, and at mile 50.7.

DRAINAGE AREA.--46.7 mi^2.

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 616.80 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Feb. 6-12. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--10 years, 52.5 ft^3/s, 15.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,370 ft^3/s, Apr. 4, 1989, gage height, 21.52 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	1000	1,520	12.18	Mar. 5	0930	1,630	12.52
Dec. 28	0700	1,920	13.39	Mar. 31	0630	2,100	13.88
Jan. 8	0400	1,590	12.39	Apr. 4	0600	*5,370	*21.52
Jan. 14	2030	2,190	14.13	July 4	0100	2,060	13.79
Feb. 3	0830	2,610	15.27	July 19	2330	1,880	13.25
Feb. 14	0500	3,240	16.77	Aug. 23	1700	2,070	13.81
Feb. 15	0800	2,880	15.95				

No flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	13	54	21	30	210	26	2.5	6.5	21	1.9
2	.00	.00	8.1	50	45	28	114	22	2.2	3.7	4.8	2.4
3	.00	.00	6.2	40	1340	28	163	17	7.6	276	1.6	1.8
4	.00	.00	4.6	30	225	26	2430	14	23	718	1.0	1.7
5	.00	.00	4.3	26	106	703	196	24	157	217	1.0	2.1
6	.00	.00	4.1	320	64	620	111	61	52	97	22	2.4
7	.00	.00	3.9	121	41	150	88	37	35	57	20	2.0
8	.00	.00	3.4	550	34	87	174	28	25	39	15	1.8
9	.00	.00	2.7	95	29	67	145	457	176	43	.83	1.7
10	.00	.00	2.4	53	25	56	88	187	72	29	.45	4.5
11	.00	.00	2.1	117	20	49	66	77	37	15	.39	12
12	.00	.00	1.7	557	20	43	53	52	26	19	.27	4.3
13	.00	.03	1.6	147	650	39	44	41	34	8.1	.22	2.2
14	.00	.01	1.7	571	1510	41	37	32	25	9.8	.18	1.5
15	.00	.00	1.9	334	1760	36	35	36	29	5.6	.16	8.6
16	.00	.00	1.7	115	713	27	30	30	37	2.8	.12	10
17	.00	.00	1.5	75	154	25	27	26	24	1.8	.12	4.4
18	.00	.00	1.4	58	85	26	28	17	13	1.4	.61	2.5
19	.00	34	1.4	46	62	23	43	15	19	365	.74	1.9
20	.00	409	1.5	39	76	235	28	60	155	362	.66	1.4
21	.00	62	23	31	761	511	23	36	135	67	.81	1.1
22	.00	31	32	27	181	114	21	21	46	33	.96	1.3
23	.00	19	69	24	88	72	18	123	29	16	478	3.0
24	.00	12	523	23	61	56	18	53	18	6.9	195	3.7
25	.00	6.0	116	21	55	46	18	34	10	4.2	51	4.2
26	.00	7.6	62	31	53	40	17	49	6.8	2.3	28	3.1
27	.00	115	51	51	42	35	23	29	4.7	1.4	15	2.0
28	.00	46	677	36	36	35	18	14	189	1.3	6.5	1.7
29	.00	27	115	31	---	102	142	7.9	41	1.1	3.7	1.7
30	.00	19	60	29	---	363	43	5.6	17	1.0	2.4	1.7
31	.00	---	45	24	---	869	---	4.0	---	1.3	1.7	---
TOTAL	0.00	787.64	1842.2	3726	8257	4582	4451	1635.5	1447.8	2412.2	874.22	94.6
MEAN	.00	26.3	59.4	120	295	148	148	52.8	48.3	77.8	28.2	3.15
MAX	.00	409	677	571	1760	869	2430	457	189	718	478	12
MIN	.00	.00	1.4	21	20	23	17	4.0	2.2	1.0	.12	1.1
CFSM	.00	.56	1.27	2.57	6.31	3.17	3.18	1.13	1.03	1.67	.60	.07
IN.	.00	.63	1.47	2.97	6.58	3.65	3.55	1.30	1.15	1.92	.70	.08

CAL YR 1988 TOTAL 15251.03 MEAN 41.7 MAX 1800 MIN .00 CFSM .89 IN. 12.15
WTR YR 1989 TOTAL 30110.16 MEAN 82.5 MAX 2430 MIN .00 CFSM 1.77 IN. 23.98

SALT RIVER BASIN

03297980 LONG RUN NEAR FISHERVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°13'10", long 85°26'56", Jefferson County, Hydrologic Unit 05140102, at bridge on State Highway 1531, 0.7 mi below South Long Run and at mile 2.4.

DRAINAGE AREA.-- 22.5 mi^2.

PERIOD OF RECORD.--August 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
NOV							
10...	0855	0.51	593	7.80	11.5	7.6	70
28...	0940	10	394	9.17	5.0	10.6	83
DEC							
06...	0930	1.0	542	8.38	1.0	14.4	102
20...	0925	0.59	537	8.30	5.5	13.3	105
JAN							
10...	1130	29	365	8.10	3.5	13.0	98
24...	1030	9.2	430	8.64	4.5	12.9	99
FEB							
07...	0900	21	450	8.73	0.0	13.2	90
22...	1010	89	310	7.90	5.0	11.8	94
MAR							
07...	1000	78	351	7.94	3.0	13.1	97
24...	1000	27	421	7.92	10.5	10.9	96
APR							
04. .	1000	541	230	5.91	13.0	10.0	95
19...	1030	19	409	7.11	12.5	10.2	94
MAY							
03...	1110	11	420	7.95	13.0	11.2	104
16...	1035	14	405	7.80	15.5	10.4	104
31...	1050	4.7	437	9.84	20.0	9.9	107
JUN							
13...	1045	74	349	7.60	20.0	8.6	94
29...	1215	2.4	389	7.70	25.5	11.1	134
JUL							
12...	1100	4.5	381	7.50	25.0	9.7	117
25...	1045	4.4	377	7.81	25.5	10.0	120
AUG							
08...	1400	0.87	335	7.90	24.5	12.3	147
22...	1010	0.09	396	7.39	24.5	7.8	93
SEP							
07...	1115	0.13	368	7.27	25.0	7.5	90
19...	1120	0.09	391	6.90	17.5	11.2	118

03298000 FLOYDS FORK AT FISHERVILLE, KY

LOCATION.--Lat 38°11'18", long 85°27'37", Jefferson County, Hydrologic Unit 05140102, on left bank on downstream side of bridge on former State Highway 155, at Fisherville, 0.2 mi downstream from Brush Run, 1.4 mi upstream from Pope Lick, and at mile 32.7.

DRAINAGE AREA.--138 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1944 to current year. Monthly discharge only for August 1944, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1946. WSP 1909: 1945(P), 1948(P), 1960(M).

GAGE.--Water-stage recorder. Datum of gage is 542.60 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges: Water-discharge records good.

AVERAGE DISCHARGE.--45 years, 175 ft^3/s, 17.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,500 ft^3/s, Apr. 2, 1970, gage height, 15.63 ft, in gage well, 16.15 ft, from floodmark; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of 16.8 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	0900	6,120	9.86	Apr. 4	0530	*15,600	*14.22
Feb. 14	0400	7,480	10.80	Apr. 26	2230	9,580	11.99
Feb. 15	1500	7,600	10.88				

Minimum daily discharge, 0.07 ft^3/s, Oct. 20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.78	41	189	78	116	756	130	20	50	17	8.5
2	1.3	.52	31	194	83	104	388	103	17	44	41	11
3	2.0	.19	25	149	3870	99	400	84	15	580	23	12
4	2.4	.75	21	119	1020	91	10300	72	21	1670	13	11
5	1.9	35	18	99	433	1790	756	90	206	764	6.5	8.5
6	1.6	34	15	735	272	2000	402	206	171	255	19	6.2
7	1.3	23	14	436	194	549	334	135	76	144	24	5.4
8	1.0	13	14	1610	153	315	460	100	46	90	31	4.4
9	.79	7.5	12	396	133	238	487	1220	338	90	14	2.5
10	.58	6.5	12	215	109	194	294	745	196	77	7.4	8.7
11	.38	16	10	222	101	167	226	267	81	98	4.1	21
12	.22	23	9.1	1530	93	143	188	176	688	50	1.9	20
13	.14	14	9.0	579	1380	131	154	133	217	33	1.0	14
14	.12	7.2	9.0	1180	5200	136	131	106	114	28	1.4	7.1
15	.09	4.0	9.5	1660	5390	122	120	108	122	19	1.2	18
16	.09	3.8	9.1	434	2660	97	106	92	108	13	.52	38
17	.08	4.9	8.9	256	664	87	91	72	91	9.7	.61	29
18	.10	4.4	8.4	191	384	87	88	59	60	5.9	.49	17
19	.09	171	7.9	151	280	82	124	50	85	1050	.84	11
20	.07	1330	7.7	125	293	237	107	155	227	1510	1.1	7.7
21	.10	241	44	103	2050	1630	83	108	226	233	4.8	5.3
22	.14	98	74	88	728	422	71	69	120	120	8.9	4.2
23	3.5	61	157	83	369	260	66	172	72	69	437	8.6
24	5.1	44	1270	78	254	199	62	141	51	45	875	9.6
25	2.6	35	517	72	220	161	60	86	43	31	164	10
26	1.1	31	191	91	199	136	1220	192	41	24	84	7.8
27	.89	296	127	156	163	117	1420	115	36	18	53	4.8
28	1.5	147	1750	119	137	119	186	64	152	13	35	3.2
29	1.2	79	576	102	---	244	349	46	159	8.8	25	2.2
30	1.0	54	251	97	---	1130	205	36	74	7.3	17	2.5
31	.93	---	180	87	---	2460	---	27	---	9.2	11	---
TOTAL	33.61	2785.54	5428.6	11546	26910	13663	19634	5159	3873	7158.9	1923.76	319.2
MEAN	1.08	92.9	175	372	961	441	654	166	129	231	62.1	10.6
MAX	5.1	1330	1750	1660	5390	2460	10300	1220	688	1670	875	38
MIN	.07	.19	7.7	72	78	82	60	27	15	5.9	.49	2.2
CFSM	.01	.67	1.27	2.70	6.96	3.19	4.74	1.21	.94	1.67	.45	.08
IN.	.01	.75	1.46	3.11	7.25	3.68	5.29	1.39	1.04	1.93	.52	.09

CAL YR 1988 TOTAL 46602.98 MEAN 127 MAX 5010 MIN .00 CFSM .92 IN. 12.56
WTR YR 1989 TOTAL 98434.61 MEAN 270 MAX 10300 MIN .07 CFSM 1.95 IN. 26.53

03298000 FLOYDS FORK AT FISHERVILLE, KY--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
12...	0915	0.26	572	8.00	8.0	7.4	63
25...	0905	2.8	395	7.52	7.0	6.1	50
NOV							
08...	0930	13	545	7.90	10.0	7.9	70
22...	0915	100	370	8.60	6.0	10.0	79
DEC							
06...	1045	15	535	8.34	2.5	12.2	89
20...	1010	8.5	577	8.30	5.0	13.1	103
JAN							
10...	1430	197	421	8.10	5.0	15.9	126
24...	1330	79	492	7.69	6.0	13.1	105
FEB							
07...	1040	189	463	8.17	0.5	14.2	98
22...	1300	626	306	7.70	5.0	11.5	91
MAR							
07...	1310	526	376	7.65	4.0	12.7	96
24...	1330	190	431	8.16	13.0	12.7	119
APR							
04...	1400	12000	136	6.99	14.5	8.9	87
19...	1330	121	426	7.81	16.0	12.9	128
MAY							
03...	1420	87	445	7.98	14.5	10.3	100
16...	1415	91	450	7.90	19.0	11.2	120
31...	1400	26	466	7.69	25.5	7.5	90
JUN							
13...	1400	165	350	7.83	21.5	8.0	90
29...	0930	159	413	7.30	23.5	7.5	86
JUL							
12...	1410	37	367	7.49	27.5	7.9	100
25...	1400	29	420	7.73	28.5	7.2	91
AUG							
08...	1035	28	450	7.60	20.5	6.4	71
22...	1430	8.5	428	7.71	25.5	8.1	99
SEP							
07...	1415	4.6	438	7.68	26.5	8.8	108
19...	1415	11	465	7.30	20.5	8.2	91

03298100 POPE LICK AT POPE LICK ROAD NEAR MIDDLETOWN, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°13'09", long 85°31'07", Jefferson County, Hydrologic Unit 05140102, at culvert on Pope Lick Road, and at mile 3.2.

DRAINAGE AREA.-- 2.9 mi^2.

PERIOD OF RECORD.--February 1988 and current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
12...	1020	0.38	798	7.70	8.0	8.0	68
25...	1315	0.52	746	7.66	10.5	8.1	73
NOV							
08...	1050	0.91	838	7.80	11.0	6.3	57
22...	1020	2.0	740	8.60	7.0	8.8	72
DEC							
06...	1400	0.81	734	8.25	7.5	12.9	108
20...	1100	0.61	690	8.10	7.5	9.2	77
JAN							
10...	0930	5.5	539	8.10	4.0	11.1	85
24...	0915	2.0	607	7.82	5.0	10.7	84
FEB							
07...	1330	6.1	501	8.66	3.5	12.4	93
22...	0905	15	407	7.50	6.0	11.4	93
MAR							
07...	0900	11	434	8.03	4.5	11.6	89
24...	0900	5.1	490	7.82	9.5	10.7	93
APR							
04...	1100	46	335	6.07	13.0	9.0	85
19...	0920	3.5	459	7.10	11.0	9.2	82
MAY							
03...	0950	3.4	282	7.87	12.5	9.7	90
16...	0935	3.0	521	7.80	13.5	8.9	85
31...	0930	1.8	548	7.21	21.5	7.0	78
JUN							
13...	0920	7.8	501	7.60	18.5	8.5	90
29...	1140	0.67	584	7.50	23.0	10.6	122
JUL							
12...	1000	1.1	518	7.27	24.0	6.8	80
25...	0950	1.4	537	7.20	25.0	6.9	82
AUG							
08...	0950	1.0	643	7.50	18.5	7.1	75
22...	0920	1.6	500	7.21	23.0	6.1	71
SEP							
07...	0955	0.71	673	7.09	22.5	5.2	60
19...	0930	0.42	669	7.80	16.0	5.9	61

03298150 CHENOWETH RUN AT GELHAUS LANE NEAR FERN CREEK, KY

WATER-QUALITY RECORDS

LOCATION .--Lat 38°09'36", long 85°32'32", Jefferson County, Hydrologic Unit 05140102, at bridge on Gelhaus Lane, 100 feet above Razor Branch, and at mile 2.3.

DRAINAGE AREA.--11.6 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
12...	1320	1.1	811	7.80	13.0	11.2	106
25...	1400	3.6	701	8.82	12.0	12.9	119
NOV							
08...	1335	4.9	708	9.00	14.5	14.4	140
22...	1320	12	672	9.30	11.0	12.5	112
DEC							
08...	0920	2.2	713	9.02	5.0	11.3	88
20...	1325	4.5	767	8.20	9.5	10.7	94
JAN							
12...	0835	57	282	7.50	10.0	9.9	87
26...	0915	12	547	8.39	10.5	9.8	87
FEB							
09...	0910	10	600	7.76	0.0	13.0	87
24...	0920	24	509	8.10	6.0	8.8	71
MAR							
14...	0900	14	534	7.96	10.5	11.5	103
28...	0930	9.3	533	8.50	15.5	13.0	130
APR							
11...	0920	23	523	8.00	68.0	12.4	279
25...	0910	6.3	561	7.43	15.5	9.0	90
MAY							
09...	0925	19	487	6.20	14.5	7.7	75
23...	0935	35	369	7.70	16.0	8.7	88
JUN							
06...	0900	8.4	461	7.90	19.0	10.1	108
21...	0920	6.9	574	7.60	21.5	11.3	129
JUL							
05...	0915	8.8	479	7.40	21.5	9.9	111
18...	0915	2.0	634	7.64	19.5	10.2	111
AUG							
01...	0920	5.3	483	8.00	23.5	7.1	84
15...	0900	1.3	665	7.60	20.0	7.0	78
29...	0930	1.4	690	7.51	25.5	9.1	110
SEP							
08...	0930	2.0	608	7.21	24.0	8.2	97
27...	0915	1.5	721	8.00	11.0	7.4	67

03298200 FLOYDS FORK NEAR MOUNT WASHINGTON, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°05'07", long 85°33'18", Jefferson County, Hydrologic Unit 05140102, at bridge on U.S. Highway 31E, 0.2 mi below Old Mans Run, and at mile 18.7.

DRAINAGE AREA.--213 mi^2.

PERIOD OF RECORD.--February to September 1988.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
11...	0905	3.0	722	7.70	9.5	8.1	72
24...	1350	8.4	771	8.40	9.5	8.2	72
NOV							
07...	1410	41	604	8.00	10.0	8.4	74
18...	0840	7.8	637	8.00	4.5	9.9	77
DEC							
05...	0900	32	446	8.57	1.0	12.9	90
19...	1320	14	616	8.30	5.0	15.7	123
JAN							
09...	1335	583	364	8.20	5.0	11.4	89
23...	1400	125	312	8.15	5.0	12.6	98
FEB							
06...	1340	547	461	7.93	1.5	13.5	96
21...	1340	4570	296	8.00	6.5	10.8	90
MAR							
06...	1345	3700	283	7.94	4.5	12.1	94
17...	1330	155	482	7.83	14.0	12.3	119
APR							
03...	1430	655	425	6.90	14.0	10.3	100
17...	1430	152	460	7.91	16.0	12.3	123
MAY							
02...	1400	164	438	7.74	16.0	9.7	97
15...	1400	194	452	8.10	17.0	10.0	103
30...	1400	69	469	7.78	25.5	8.3	100
JUN							
12...	1400	80	418	7.64	23.5	7.6	89
26...	1345	33	426	7.30	28.0	8.3	105
JUL							
11...	1400	67	446	7.73	30.0	9.7	126
24...	1410	81	430	7.62	27.0	7.6	94
AUG							
07...	1355	46	430	8.10	23.0	7.5	87
21...	1430	3.8	508	7.61	23.5	6.6	77
SEP							
05...	1340	16	489	7.71	24.5	7.7	91
18...	1120	28	475	7.80	19.0	7.8	84

03298250 CEDAR CREEK AT THIXTON ROAD NEAR LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.-- Lat 38°04'45", long 85°36'58", Jefferson County, Hydrologic Unit 05140102, at culvert on Thixton Road, 4.2 mi above Pennsylvania Run, and at mile 7.4.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
11...	1000	0.85	1010	7.90	11.0	10.6	97
24...	1020	3.7	1010	8.36	7.0	8.0	66
NOV							
07...	1345	3.8	619	8.30	10.5	9.4	84
18...	0920	1.2	992	8.10	4.5	9.7	75
DEC							
05...	1000	3.1	620	8.26	2.5	14.3	104
19...	1015	2.5	905	8.30	4.0	15.2	116
JAN							
09...	1030	31	489	7.70	5.0	12.4	97
23...	1120	8.1	628	8.45	4.0	13.0	99
FEB							
06...	0950	27	509	7.94	2.0	12.8	92
21...	1045	266	263	7.80	7.5	10.4	89
MAR							
06...	1010	126	295	8.11	5.0	11.1	88
17...	1000	11	600	8.15	10.5	14.1	127
APR							
03...	1040	38	473	7.60	13.5	10.8	104
17...	1130	7.7	524	8.90	14.0	16.5	159
MAY							
01...	1050	13	625	8.00	15.0	10.8	108
02...	1030	5.1	612	7.88	13.0	10.0	94
30...	0950	5.2	600	9.80	21.5	8.8	98
JUN							
12...	1020	4.8	580	7.70	20.5	7.9	87
26...	1045	1.9	668	7.60	24.0	8.9	105
JUL							
11...	1000	0.95	729	7.57	25.5	7.4	89
24...	1030	2.5	716	7.70	24.5	8.0	94
AUG							
07...	1050	2.6	987	7.80	20.5	8.1	89
21...	1025	1.6	617	7.39	21.5	6.7	75
SEP							
05...	1022	2.0	629	7.46	22.0	8.0	90
18...	1030	1.5	790	8.00	17.0	8.7	90

03298300 PENNSYLVANIA RUN AT MT. WASHINGTON ROAD NEAR LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°05'15", long 85°38'33", Jefferson County, Hydrologic Unit 05140102, at bridge on Mt. Washington Road, and at mile 1.9.

DRAINAGE AREA.--6.4 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
11...	1330	0.16	675	8.00	13.5	7.1	69
24...	0930	1.4	538	8.87	8.5	8.1	69
NOV							
07...	1030	1.5	541	8.10	9.0	8.7	75
18...	1010	0.91	560	8.50	7.0	6.9	57
DEC							
05...	1330	1.3	346	8.17	5.5	12.8	101
19...	0930	2.4	631	7.70	3.5	11.4	86
JAN							
09...	0930	20	446	8.00	5.0	11.9	93
23...	1015	6.0	418	8.45	4.0	12.6	97
FEB							
06...	0915	17	383	7.97	3.0	12.5	92
21...	0915	96	258	7.70	7.0	11.3	96
MAR							
06...	0900	89	308	7.90	6.5	12.9	105
17...	0910	6.8	388	7.94	9.0	11.1	95
APR							
03...	0920	21	368	6.80	13.0	9.9	95
17...	0930	2.5	400	7.58	12.0	9.8	90
MAY							
02...	0915	2.9	452	7.91	13.0	7.7	72
15...	1000	5.3	410	7.30	15.5	8.0	81
30...	0855	2.4	490	7.41	20.5	6.0	66
JUN							
12...	0915	2.1	504	7.36	21.0	5.2	58
26...	0940	0.77	592	7.10	23.0	4.9	57
JUL							
11...	0900	0.55	630	7.08	24.5	5.2	61
24...	0910	0.91	644	7.13	23.5	5.4	62
AUG							
07...	0950	0.85	648	7.50	19.5	5.0	54
21...	0915	0.55	662	7.27	21.5	5.6	63
SEP							
05...	0920	0.66	762	7.04	17.5	5.2	54
18...	0900	0.48	681	7.50	16.0	5.6	57

SALT RIVER BASIN

03298500 SALT RIVER AT SHEPHERDSVILLE, KY

LOCATION.--Lat 37°59'06", long 85°43'03", Bullitt County, Hydrologic Unit 05140102, on downstream side of bridge on State Highway 61 at Shepherdsville, 500 ft downstream from Louisville and Nashville Railroad bridge, 2.6 mi downstream from Floyds Fork, and at mile 22.9.

DRAINAGE AREA.--1,197 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WSP 893: 1937(M). WSP 1435: 1955: WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 406.58 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 16, 1939, nonrecording gage at same site and datum. Jan. 16, 1939, to May 21, 1962, water-stage recorder at same site and datum. May 22, 1962, to Nov. 26, 1963, nonrecording gage at same site and datum. Since Oct. 16, 1969, auxiliary water-stage recorder on Floyds Fork 2.8 mi upstream. Prior to Oct. 1, 1946, auxiliary nonrecording gages at various sites downstream from base gage. Oct. 1, 1946, to Oct. 16, 1969, auxiliary nonrecording gage 2.8 mi upstream.

REMARKS.--Estimated daily discharges: Oct. 1-6, Dec. 27-28, Jan. 14-17, Jan. 25 to Feb. 2, 10-13, 18-21, June 6-25, July 4-5, 11-12, Aug. 28-30. Water-discharge records good except for estimated periods, which are fair. Flow regulated since January 1983 by Taylorsville Lake (station 03295597).

AVERAGE DISCHARGE.--51 years, 1,551 ft^3/s, 17.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,200 ft^3/s, Mar. 10, 1964; maximum gage height, 41.50 ft, Mar. 11, 1964; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 26, 1937, reached a stage of 47.3 ft, from floodmark (backwater from Ohio River).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,300 ft^3/s, Feb. 16, maximum gage height, 31.82 ft; minimum daily discharge, 16.0 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	26	1710	3430	550	3850	8130	715	263	340	147	339
2	52	79	951	3270	486	3770	4410	625	227	322	142	156
3	41	68	416	3120	11900	3690	3800	489	185	346	114	136
4	33	39	251	2920	12400	2500	14400	418	308	640	94	119
5	27	82	220	2730	4330	8400	17300	460	362	1110	81	113
6	23	134	252	3420	2770	16400	7430	725	684	1230	109	385
7	19	115	312	3330	3720	7900	6050	715	823	768	296	586
8	17	93	309	6900	3380	4240	5240	571	690	557	992	429
9	17	100	298	4410	3080	4500	5070	1910	560	812	649	307
10	16	107	248	3720	2850	5170	3910	5600	426	641	518	330
11	17	130	194	3370	2600	5180	3770	3250	401	590	448	299
12	20	119	174	7480	2350	5100	3310	3090	484	540	419	267
13	18	100	152	5110	18000	4500	2390	2830	1300	497	397	262
14	17	96	119	4650	27400	4370	993	2290	5060	311	384	373
15	17	92	116	10800	32900	4240	633	1100	6890	209	202	453
16	17	129	115	5410	36200	4360	678	1180	5270	155	60	463
17	21	133	109	5020	36300	4280	590	1000	9030	122	45	452
18	21	125	106	3370	35000	4220	530	691	6000	100	55	449
19	21	1230	103	3820	31000	4130	597	446	1830	102	49	430
20	19	6340	103	3400	25000	4350	616	1160	862	4480	42	408
21	22	3070	143	3160	18000	8790	543	1050	1390	2240	178	486
22	26	2680	340	2980	10600	5260	477	778	1090	790	274	322
23	31	3110	1480	2860	4090	4690	452	1170	808	510	358	175
24	34	2990	7190	2750	4960	4960	451	1570	757	362	2680	240
25	33	2590	5180	2020	4590	4650	436	1440	1510	279	1140	566
26	30	2560	1950	1120	4260	4380	424	1400	293	218	959	630
27	28	3490	2890	856	3960	4170	8390	1210	271	175	842	612
28	26	3220	3820	764	3740	3980	2100	640	259	146	790	598
29	24	2830	6340	669	---	3120	1020	410	240	124	728	586
30	25	2610	3840	621	---	4770	1030	342	289	109	625	573
31	26	---	3660	595	---	9260	---	299	---	107	611	---
TOTAL	802	38487	43091	108075	346416	163180	105170	39574	48562	18932	14428	11544
MEAN	25.9	1283	1390	3486	12370	5264	3506	1277	1619	611	465	385
MAX	64	6340	7190	10800	36300	16400	17300	5600	9030	4480	2680	630
MIN	16	26	103	595	486	2500	424	299	185	100	42	113

CAL YR 1988 TOTAL 429077.8 MEAN 1172 MAX 23700 MIN 7.7
WTR YR 1989 TOTAL 938261 MEAN 2571 MAX 36300 MIN 16

03298500 SALT RIVER AT SHEPHERDSVILLE, KY--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-75, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1980 to September 1984.
WATER TEMPERATURES: 1949 to 1975, January 1980 to September 1984.
SUSPENDED-SEDIMENT DISCHARGE: 1952 to 1961.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3
OCT 1988												
26...	1200	27	400	8.40	11.0	3.5	10.9	100	--	--	180	51
DEC												
06...	1215	239	462	8.10	5.0	7.3	11.2	89	200	120	210	58
FEB 1989												
07...	1300	3940	320	8.10	3.0	35	12.0	89	K1500	190	150	29
16...	1310	33600	167	7.53	--	150	--	--	--	--	81	16
APR												
04...	1540	15300	188	7.69	14.5	340	9.4	94	53000	K160000	94	6
JUN												
13...	1100	2350	221	7.75	21.5	280	6.2	71	K12000	>20000	100	9
AUG												
01...	1100	158	421	7.78	26.0	24	5.0	62	390	430	190	22

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1988											
26...	52	11	16	3.7	148	2	125	125	19	54	0.30
DEC											
06...	63	13	9.0	3.5	186	--	152	153	13	46	0.20
FEB 1989											
07...	49	7.0	3.7	2.6	154	--	126	122	6.9	29	0.20
16...	25	4.4	1.8	2.8	78	--	64	65	3.7	18	0.10
APR											
04...	29	5.2	2.1	2.4	79	1	66	67	3.3	17	0.10
JUN											
13...	30	6.8	3.3	3.4	93	--	76	77	4.8	15	0.10
AUG											
01...	60	10	7.9	4.6	215	--	176	173	5.4	29	0.30

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
26...	1.4	247	235	0.010	0.350	0.020	0.010	0.40	0.250	0.230	0.150
DEC											
06...	4.4	258	252	0.030	1.60	0.060	0.060	0.80	0.230	0.170	0.140
FEB 1989											
07...	5.2	185	186	<0.010	1.90	0.070	0.080	1.0	0.360	0.160	0.140
16...	4.3	104	105	0.020	1.10	0.130	0.100	1.5	0.780	0.230	0.190
APR											
04...	5.0	127	120	0.020	0.660	0.150	0.070	1.0	0.700	0.170	0.130
JUN											
13...	3.7	142	128	0.010	0.790	0.040	0.070	0.90	0.380	0.140	0.100
AUG											
01...	5.2	229	229	0.030	1.10	0.050	0.070	0.90	0.290	0.190	0.170

03298500 SALT RIVER AT SHEPHERDSVILLE, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
OCT 1988											
26...	10	2	27	<0.5	2	<1	<3	2	11	<5	5
DEC											
06...	<10	1	24	<0.5	2	<1	<3	2	35	<5	6
FEB 1989											
07...	--	--	--	--	--	--	--	--	--	--	--
16...	250	<1	11	<0.5	<1	<1	<3	6	160	<5	<4
APR											
04...	300	1	17	<0.5	<1	1	<3	3	340	<5	<4
JUN											
13...	100	<1	19	<0.5	1	1	<3	3	110	1	21
AUG											
01...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1988											
26...	6	<10	1	<1	<1.0	150	<6	6	7	0.52	54
DEC											
06...	70	<10	4	<1	<1.0	130	<6	6	8	5.8	88
FEB 1989											
07...	--	--	--	--	--	--	--	--	78	830	84
16...	8	<10	1	<1	<1.0	42	<6	5	178	16200	95
APR											
04...	24	<10	3	<1	<1.0	46	<6	6	773	31900	95
JUN											
13...	6	<10	<1	<1	<1.0	48	<6	9	398	2530	95
AUG											
01...	--	--	--	--	--	--	--	--	26	11	85

03298000 ROLLING FORK NEAR LEBANON, KY

LOCATION.--Lat 37°29'50", long 85°19'26", Marion County, Hydrologic Unit 05140103, on left bank at downstream side of bridge on State Highway 289, 2.2 mi downstream from Buckhorn Creek, 5.4 mi southwest of city limits of Lebanon, 14.0 mi downstream from confluence of North and Big South Forks, and at mile 94.0.

DRAINAGE AREA.--239 mi^2.

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 580.71 ft above National Geodetic Vertical Datum of 1929. Prior to May 28, 1953, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--51 years, 344 ft^3/s, 19.55 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,800 ft^3/s, Apr. 28, 1970, gage height, 24.51 ft, from rating curve extended above 14,000 ft^3/s, on basis of contracted-opening and flow-over-road measurement of peak flow; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 24.7 ft occurred in 1913, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	1800	11,200	15.37	Feb. 14	1200	*26,500	*21.13
Nov. 20	1500	19,700	19.13	Feb. 15	2000	22,100	19.94
Dec. 24	2000	15,200	17.43	Feb. 21	1100	13,800	16.81
Jan. 15	0100	8,040	13.27	Mar. 6	0500	16,500	17.93
Feb. 3	1700	15,800	17.66	June 15	1400	12,800	16.97

Minimum daily discharge, 0.31 ft^3/s, Oct. 16-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	20	219	490	189	257	938	49	13	57	3.8	13
2	20	15	175	426	278	228	512	51	11	63	52	11
3	15	13	145	370	12200	215	761	49	9.5	69	22	11
4	14	14	125	311	5210	199	4260	41	35	136	12	10
5	13	292	107	259	1280	8110	2000	96	82	151	8.2	8.0
6	11	336	95	1270	801	8910	965	179	87	89	22	6.2
7	9.0	212	88	901	552	1740	648	136	78	68	140	5.1
8	7.2	147	79	1840	414	951	497	95	44	52	51	4.1
9	5.8	99	69	1020	331	632	399	221	161	42	28	3.4
10	4.6	624	64	648	274	470	302	767	237	34	17	3.1
11	3.7	614	58	787	263	376	248	256	104	29	12	2.6
12	2.3	227	51	3920	239	305	220	178	293	29	9.6	2.1
13	1.6	151	48	2370	6220	284	198	141	4640	24	8.1	1.9
14	1.4	118	47	3270	22300	325	180	120	1220	20	6.6	1.6
15	.59	90	47	4200	18400	265	203	101	7230	17	5.3	2.1
16	.31	78	45	1290	10700	220	218	85	2250	14	4.1	354
17	.31	77	41	767	2080	204	182	71	865	11	2.7	386
18	.31	71	38	543	1100	204	165	58	450	9.3	17	115
19	.31	6500	36	418	712	208	153	49	309	10	68	62
20	.31	13100	35	340	788	336	140	70	263	11	27	41
21	.47	1520	643	272	8710	3200	130	80	194	30	19	31
22	.90	657	973	227	2150	1200	119	55	156	28	15	66
23	3.3	418	3450	201	1090	626	112	186	941	18	12	2630
24	6.5	291	8300	178	669	416	107	109	686	14	10	653
25	8.7	216	7540	154	522	301	99	67	259	10	480	237
26	7.8	207	2170	163	464	238	86	58	172	7.6	179	152
27	9.9	965	673	193	381	204	73	55	131	5.6	83	105
28	12	558	1840	167	314	181	62	45	103	5.1	46	81
29	14	370	1480	148	---	172	55	31	83	4.6	29	70
30	16	284	765	165	---	274	49	22	68	3.8	21	67
31	19	---	548	208	---	1550	---	17	---	3.9	16	---
TOTAL	233.31	28284	29994	27516	98631	32801	14081	3538	21176.5	1065.9	1426.4	5135.2
MEAN	7.53	943	968	888	3523	1058	469	114	706	34.4	46.0	171
MAX	24	13100	8300	4200	22300	8910	4260	767	7230	151	480	2630
MIN	.31	13	35	148	189	172	49	17	9.5	3.8	2.7	1.6
CFSM	.03	3.94	4.05	3.71	14.7	4.43	1.96	.48	2.95	.14	.19	.72
IN.	.04	4.40	4.67	4.28	15.35	5.11	2.19	.55	3.30	.17	.22	.80

CAL YR 1988 TOTAL 123806.58 MEAN 338 MAX 13100 MIN .00 CFSM 1.42 IN. 19.27
WTR YR 1989 TOTAL 263882.31 MEAN 723 MAX 22300 MIN .31 CFSM 3.02 IN. 41.07

SALT RIVER BASIN

03300400 BEECH FORK AT MAUD, KY

LOCATION.--Lat 37°49'58", long 85°17'46", Nelson County, Hydrologic Unit 05140103, on right bank on downstream side of bridge on State Highway 55, 100 ft upstream from Nealy Run, 0.8 mi north of Maud, 1.7 mi downstream from Chaplin River, and at mile 48.1.

DRAINAGE AREA.--436 mi^2.

PERIOD OF RECORD.--August 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Sept. 14-15. Records good except for estimated daily discharges, which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--17 years, 630 ft^3/s, 19.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,300 ft^3/s, Dec. 9, 1978, gage height, 26.16 ft; no flow Oct. 8, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 4-6, 1964, reached a stage of 25.64 ft, discharge, 28,300 ft^3/s, from information by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1200	22,600	22.65	Feb. 16	0400	*30,600	*25.33
Dec. 25	0300	12,300	18.55	Feb. 21	1800	9,980	17.49
Jan. 8	1900	10,400	17.61	Mar. 6	0500	19,700	21.62
Jan. 15	1000	11,800	18.29	Mar. 21	1400	9,370	17.08
Feb. 3	2400	13,800	19.31				

Minimum daily discharge, 2.7 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	24	342	473	177	356	2470	107	103	64	17	40
2	48	23	274	387	175	306	987	96	78	54	12	33
3	42	24	227	329	8610	277	1050	89	62	49	9.5	28
4	36	27	195	283	9890	261	5540	82	91	161	8.3	23
5	32	39	166	244	2530	6290	4750	93	651	161	7.6	19
6	30	84	144	934	936	17400	1630	119	453	104	151	16
7	28	111	128	1680	641	6340	1020	142	182	110	1090	13
8	25	146	116	7610	480	1420	813	127	102	103	308	9.6
9	22	121	103	4350	366	926	837	1290	76	62	135	7.3
10	19	379	91	1070	313	728	643	3610	59	47	80	6.9
11	18	1140	81	748	294	607	531	774	56	39	56	7.5
12	15	556	69	4280	255	524	465	357	57	33	45	7.1
13	12	260	65	3040	4910	487	409	243	1300	29	36	6.6
14	11	171	63	3730	27200	640	352	193	3370	25	30	3.1
15	8.9	124	59	9450	29400	633	342	177	3830	21	25	4.3
16	7.8	95	56	2800	27000	480	366	178	4430	18	21	6.6
17	7.3	76	55	1030	9160	404	334	157	1530	15	18	8.6
18	8.2	65	53	694	1540	416	276	117	644	13	15	8.7
19	9.1	8280	51	519	934	624	274	95	429	15	39	14
20	2.7	20000	50	412	744	1130	302	3100	333	164	56	24
21	4.9	11300	425	329	7620	8020	245	998	318	284	45	24
22	7.8	2160	1550	271	4560	3420	213	422	259	110	36	22
23	11	690	4030	237	1310	1170	196	2170	196	60	62	5890
24	14	472	8150	215	820	791	185	1110	646	45	132	3240
25	17	352	8780	198	638	599	174	463	398	36	293	715
26	22	305	2200	191	561	485	162	305	191	29	515	302
27	20	1650	720	210	497	411	148	674	153	21	197	175
28	36	1220	2930	211	425	350	157	438	193	16	134	112
29	35	640	3640	202	---	318	145	238	112	13	93	86
30	30	442	1090	191	---	490	127	169	78	11	63	67
31	26	---	641	184	---	2910	---	126	---	11	49	---
TOTAL	660.7	50976	36544	46502	141986	59213	25143	18259	20380	1923	3778.4	10919.3
MEAN	21.3	1699	1179	1500	5071	1910	838	589	679	62.0	122	364
MAX	55	20000	8780	9450	29400	17400	5540	3610	4430	284	1090	5890
MIN	2.7	23	50	184	175	261	127	82	56	11	7.6	3.1
CFSM	.05	3.90	2.70	3.44	11.6	4.38	1.92	1.35	1.56	.14	.28	.83
IN.	.06	4.35	3.12	3.97	12.11	5.05	2.15	1.56	1.74	.16	.32	.93

CAL YR 1988 TOTAL 199998.91 MEAN 546 MAX 20000 MIN .06 CFSM 1.25 IN. 17.06
WTR YR 1989 TOTAL 416284.4 MEAN 1141 MAX 29400 MIN 2.7 CFSM 2.62 IN. 35.52

03301500 ROLLING FORK NEAR BOSTON, KY

LOCATION.--Lat 37°46'02", long 85°42'14", Nelson County, Hydrologic Unit 05140103, on downstream side near center of span of bridge on U.S. Highway 62 and State Highway 61, 0.4 mi downstream from Beech Fork, 2.3 mi southwest of Boston, and at mile 19.8.

DRAINAGE AREA.--1,299 mi^2.

PERIOD OF RECORD.--May 1938 to current year.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.42 ft above National Geodetic Vertical Datum of 1929. Apr. 22, 1941, to Sept. 30, 1971, nonrecording gage at same site and datum. Prior to Apr. 22, 1941, nonrecording gage at bridge 1,400 ft upstream at same datum. Since Oct. 1, 1957, auxiliary nonrecording gage at State Highway 434 bridge 7.6 mi downstream. Feb. 4, 1942, to Sept. 30, 1957, auxiliary nonrecording gage 3.5 mi downstream. Prior to Feb. 4, 1942, auxiliary water-stage recorder or nonrecording gage at mouth of Rolling Fork 20 mi downstream.

REMARKS.--Estimated daily discharges: Nov. 19-26, Feb. 16-24, Mar. 5-7, May 19-22, June 16, 20. Records good except those for estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--51 years, 1,789 ft^3/s, 18.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 66,500 ft^3/s, Feb. 17, 1989, maximum gage height, 52.62 ft, Feb. 17, 1989 from high water mark; minimum discharge observed, 0.4 ft^3/s, Oct. 20, 1939, and for many days in September and October 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1937 reached a stage of 55.2 ft, former site, from floodmarks (backwater from Ohio River).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	Unknown	Unknown	Unknown	Feb. 5	1400	19,400	38.67
Dec. 26	0530	27,800	40.73	Feb. 17	0400	*66,500	*52.62
Jan. 16	1500	16,500	37.13	Mar. 7	1500	33,200	42.74

Minimum daily discharge, 26 ft^3/s, Oct. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	276	76	1310	1370	846	1430	6490	424	317	249	79	184
2	225	66	1120	1560	844	1280	4760	420	261	255	69	175
3	180	60	975	1390	5950	1180	3270	327	219	285	57	119
4	141	92	859	1230	15800	1110	6710	253	322	876	54	82
5	116	339	758	1110	20400	2200	10900	275	665	919	50	81
6	97	624	670	1680	13800	6000	10700	329	1110	704	68	83
7	81	795	613	3150	5270	15000	6130	397	706	460	275	70
8	71	755	548	8370	1950	24600	3160	478	455	330	919	62
9	64	625	483	14600	1520	10000	2470	661	400	282	469	56
10	57	855	426	10100	1280	4700	2120	3010	379	213	330	60
11	52	2030	382	3290	1200	2370	1740	3550	356	167	212	55
12	47	2050	339	5160	1160	2160	1490	1620	434	605	141	51
13	35	1200	303	8510	3080	1900	1330	1370	1390	736	104	48
14	32	827	301	8860	22500	1830	1210	1370	5500	282	86	43
15	30	633	284	13000	54200	1670	1210	1390	8530	159	81	46
16	28	510	264	16100	59000	1500	1260	1270	8000	113	63	66
17	27	421	244	11000	64600	1300	1190	1040	9810	83	185	80
18	28	367	229	4670	53400	1220	1070	715	6510	63	136	184
19	27	3000	216	2250	37700	1350	985	270	2030	301	95	329
20	26	14000	205	1700	25100	1610	884	380	1550	1210	89	233
21	26	42000	454	14200	16900	7460	829	680	1510	455	96	151
22	30	15000	1580	1240	17800	11200	726	1200	1180	489	124	122
23	33	5000	4680	1120	15300	9580	657	2040	814	312	398	647
24	48	2500	10600	1020	7900	4080	615	3380	760	255	1260	4990
25	61	1200	21500	848	3620	2420	580	1520	1640	298	657	3190
26	57	2000	26800	899	2250	1940	538	1310	1090	181	756	1050
27	51	2790	13800	929	2020	1570	486	1700	827	129	830	659
28	51	3630	5950	931	1700	1400	444	1240	493	100	629	436
29	52	2520	8240	897	---	1290	424	834	511	120	410	306
30	54	1600	7020	867	---	1690	424	582	327	92	291	238
31	88	---	3040	849	---	4140	---	411	---	73	217	---
TOTAL	2191	107565	114193	143600	457090	131180	74802	34446	58096	10816	9250	13896
MEAN	70.7	3585	3684	4632	16320	4232	2493	1111	1937	349	298	463
MAX	276	42000	26800	16100	64600	24600	10900	3550	9810	1210	1260	4990
MIN	26	60	205	848	844	1110	424	253	219	63	50	43
CFSM	.05	2.76	2.84	3.57	12.6	3.26	1.92	.86	1.49	.27	.23	.36
IN.	.06	3.08	3.27	4.11	13.09	3.76	2.14	.99	1.66	.31	.26	.40

CAL YR 1988 TOTAL 537736 MEAN 1469 MAX 42000 MIN 15 CFSM 1.13 IN. 15.40
WTR YR 1989 TOTAL 1157125 MEAN 3170 MAX 64600 MIN 26 CFSM 2.44 IN. 33.14

03301630 ROLLING FORK NEAR LEBANON JUNCTION, KY
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 37°49'22", long 85°44'52", Hardin County, Hydrologic Unit 05140103, at bridge on State Highway 434, 1.1 mi downstream from Wilson Creek, 1.2 mi southwest of Lebanon Junction, and at mile 12.3.

DRAINAGE AREA.--1,375 mi^2.

PERIOD OF RECORD.--Water year 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1975 to September 1980.
WATER TEMPERATURES: June 1975 to September 1980.

REMARKS.--Records of daily discharge are published for gaging station near Boston (see station 03301500) 7.5 mi upstream.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1988											
29...	1200	3330	352	8.00	9.0	71	10.4	91	4300	5800	170
FEB 1989											
16...	1900	E81400	116	7.50	--	220	--	--	--	--	55
MAY											
09...	1230	579	392	8.08	15.0	12	8.5	86	110	310	200
AUG											
08...	1115	1030	352	L8.00	25.5	210	5.9	73	K14000	3400	180

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1988											
29...	37	51	10	3.6	2.8	161	132	132	5.4	31	0.20
FEB 1989											
16...	11	15	4.2	1.3	2.3	53	43	44	1.9	17	0.10
MAY											
09...	37	57	14	5.3	2.2	194	159	159	5.7	41	0.20
AUG											
08...	21	51	12	4.3	3.9	--	--	L156	6.2	24	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1988											
29...	7.1	186	197	0.010	1.50	0.020	0.060	0.50	0.320	0.080	0.070
FEB 1989											
16...	4.5	68	75	0.020	0.400	0.080	0.050	1.1	0.540	0.090	0.060
MAY											
09...	1.0	221	225	<0.010	0.150	0.020	<0.010	0.30	0.120	0.040	<0.010
AUG											
08...	4.4	217	202	0.010	0.470	0.050	0.050	1.0	0.350	0.090	0.070

03301630 ROLLING FORK NEAR LEBANON JUNCTION, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)
NOV 1988											
29...	40	1	23	<0.5	<1	<1	<3	1	71	<5	5
FEB 1989											
16...	210	<1	9	<0.5	<1	1	<3	10	210	<5	<4
MAY											
09...	10	1	26	<0.5	3	<1	<3	2	7	<1	<4
AUG											
08...	40	1	28	<0.5	<1	<1	<3	4	28	1	<4

DATE	MANGANESE, DISSOLVED (UG/L AS MN)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 1988											
29...	15	<10	3	<1	1.0	100	<6	7	122	1100	89
FEB 1989											
16...	8	<10	5	<1	<1.0	28	<6	6	219	--	96
MAY											
09...	<1	<10	1	2	<1.0	140	<6	4	70	109	92
AUG											
08...	5	<10	<1	<1	<1.0	120	<6	6	433	1200	80

SALT RIVER BASIN

03301850 FISHPOOL CREEK AT BOST ROAD AT OKOLONA, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°07'45", long 85°41'35", Jefferson County, Hydrologic Unit 05140102, at bridge on Bost Road and at mile 0.5.

DRAINAGE AREA.--5.3 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
04...	1335	0.38	768	7.80	17.0	8.9	94
18...	1320	0.78	649	7.54	17.5	10.1	106
NOV							
01...	1320	2.7	629	7.82	11.5	13.5	123
15...	1018	1.0	838	7.80	10.5	11.2	101
30...	1305	3.5	727	8.23	7.5	11.5	96
DEC							
13...	1050	1.0	783	8.70	5.5	14.0	110
JAN							
04...	0145	3.6	655	8.50	6.0	13.6	110
18...	1045	11	641	7.40	7.0	11.8	99
31...	1045	3.1	607	7.96	7.0	13.0	107
FEB							
14...	1325	81	226	7.50	8.0	11.4	97
28...	1100	5.4	317	7.90	5.5	13.2	105
MAR							
09...	1030	10	487	8.09	7.5	14.4	117
23...	1000	13	490	8.16	8.0	14.9	123
APR							
06...	1045	20	348	7.80	10.5	11.5	101
18...	1300	3.6	530	7.39	18.5	14.8	155
MAY							
05...	1040	2.9	657	7.84	15.5	8.5	85
18...	1310	1.7	570	8.20	19.5	14.1	152
JUN							
02...	1100	1.1	606	7.57	26.5	11.8	144
15...	1100	4.8	552	8.09	19.0	8.3	89
27...	1130	0.60	653	7.50	28.0	8.8	111
JUL							
10...	1300	0.79	641	7.50	31.0	7.5	99
27...	1130	3.0	778	7.93	28.0	10.2	128
AUG							
10...	1055	0.54	675	7.60	22.5	8.7	99
24...	1050	3.1	618	7.50	24.0	4.8	56
SEP							
13...	1105	0.48	792	7.64	25.0	5.0	59
21...	1110	0.34	693	6.70	22.5	5.1	58

03301880 SOUTHERN DITCH AT MINORS LANE NEAR OKOLONA, KY

WATER-QUALITY RECORDS

LOCATION.-- Lat 38°08'04", long 85°42'34", Jefferson County, Hydrologic Unit 05140102, at bridge on Minors Lane, 0.2 mi below Mud Creek, and at mile 4.2.

DRAINAGE AREA.--128 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
04...	1420	0.59	682	7.60	17.0	5.1	54
18...	1410	0.95	782	8.35	16.0	7.0	72
NOV							
01...	1415	1.9	832	7.76	11.5	11.0	101
15...	1315	1.9	797	8.20	13.5	11.1	108
30...	1400	4.2	735	8.31	6.0	11.2	89
DEC							
13...	1330	1.5	811	7.69	3.5	14.6	110
JAN							
04...	1125	6.1	654	7.90	3.0	12.3	91
18...	1325	14	601	7.60	8.0	11.7	100
31...	1350	4.9	600	7.98	13.5	12.6	122
FEB							
14...	1430	168	202	7.20	8.0	11.2	94
28...	1320	9.7	335	7.30	6.0	14.1	114
MAR							
09...	1300	19	485	8.08	9.5	14.4	124
23...	1330	25	477	8.08	11.5	15.4	137
APR							
06...	1330	33	491	8.25	14.0	9.2	88
18...	1400	8.5	553	7.77	19.5	10.9	117
MAY							
05...	1345	6.0	585	7.97	17.0	9.2	95
18...	1400	3.8	538	8.30	20.5	9.6	105
JUN							
02...	1400	1.0	552	8.19	28.0	8.6	108
15...	1400	12	510	7.44	21.0	8.1	90
27...	1415	0.94	596	7.90	30.0	10.0	130
JUL							
10...	1410	1.1	614	7.87	31.0	9.1	120
27...	1340	2.0	697	7.85	30.0	8.0	104
AUG							
10...	1345	1.0	708	8.00	25.5	8.2	99
24...	1345	6.5	531	7.40	25.5	6.2	75
SEP							
13...	1400	1.1	798	7.80	30.5	5.4	71
21...	1340	0.63	782	7.20	23.5	7.7	90

SALT RIVER BASIN

03301900 FERN CREEK AT OLD BARDSTOWN ROAD AT LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.-- Lat 38°10'32", long 85°36'55", Jefferson County, Hydrologic Unit 05140102, at bridge on Old Bardstown Road, and at mile 3.2.

DRAINAGE AREA.--3.5 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
05...	1340	0.21	782	8.00	12.0	10.1	95
19...	1415	0.43	775	8.29	13.5	7.0	68
NOV							
02...	1400	1.1	625	7.60	10.5	11.2	101
16...	0145	1.9	747	7.90	16.0	9.1	94
DEC							
01...	1420	2.3	678	8.43	7.0	12.7	104
14...	1415	1.5	703	8.61	9.5	16.1	141
JAN							
05...	1355	4.0	679	8.30	7.0	13.0	109
19...	1400	7.6	508	8.00	10.0	11.9	107
FEB							
01...	1430	3.4	646	8.12	14.0	12.6	123
15...	1405	119	163	7.30	9.5	10.3	89
MAR							
01...	1400	6.8	564	7.95	8.0	14.8	125
15...	1420	6.7	562	8.30	12.5	14.6	136
29...	1405	7.4	546	7.10	17.0	10.5	109
APR							
12...	1400	9.7	471	8.30	14.0	12.1	117
26...	1415	3.5	586	8.57	23.5	12.3	144
MAY							
10...	1350	11	524	7.60	16.5	8.5	86
24...	1405	6.1	576	7.70	19.5	9.2	99
JUN							
07...	1330	2.8	597	7.66	20.5	9.5	105
22...	1420	3.6	608	8.10	24.0	10.5	125
JUL							
06...	1345	2.0	610	7.40	24.0	9.0	107
19...	1420	342	162	8.14	21.5	8.8	100
AUG							
02...	1410	1.5	622	8.00	24.0	8.2	98
16...	1340	0.96	663	7.70	23.0	8.4	99
30...	1330	0.98	675	7.65	25.0	8.6	104
SEP							
11...	1340	1.0	660	7.50	23.0	7.5	88
28...	1330	0.87	691	7.70	15.0	10.6	105

03301940 NORTHERN DITCH AT OKOLONA, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°09'01",long 85°41'37", Jefferson County, Hydrologic Unit 05140102, at bridge on Preston Highway, 0.1 mi above Spring Ditch, and at mile 5.1.

DRAINAGE AREA.-- 11.1 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
04...	1010	3.4	1010	7.50	15.0	9.9	100
18...	1015	4.8	889	9.40	17.0	7.5	78
NOV							
01...	0945	3.5	1050	7.90	9.5	12.0	105
15...	0937	5.9	693	7.70	14.0	10.0	98
30...	1010	9.1	672	8.30	7.0	12.6	103
DEC							
13...	1000	5.3	1040	8.40	2.5	12.5	93
JAN							
04...	1008	13	638	8.10	5.0	11.8	93
18...	1000	25	548	8.00	8.0	11.0	94
31...	0950	11	677	8.10	7.5	11.5	96
FEB							
14...	1030	212	183	7.10	8.5	11.0	95
28...	1003	22	411	7.50	6.0	12.4	100
MAR							
09...	0940	36	520	7.73	7.0	12.3	99
23...	0920	34	519	7.79	8.0	13.5	111
APR							
06...	0950	49	365	7.53	11.0	10.1	90
18...	1020	15	646	7.24	14.5	8.1	78
MAY							
05...	1000	13	610	7.79	15.5	8.3	83
18...	1020	11	596	8.10	17.5	10.6	110
JUN							
02...	1020	7.2	782	7.16	26.0	9.5	115
15...	1010	34	477	7.51	19.5	8.6	92
27...	1010	6.7	831	7.60	26.5	13.7	169
JUL							
10...	1030	5.2	586	7.80	26.0	13.5	170
27...	1020	5.5	839	7.84	28.0	12.6	158
AUG							
10...	0950	3.9	844	7.70	20.5	15.5	170
24...	0950	21	440	7.60	23.5	7.4	87
SEP							
13...	1005	14	766	7.63	22.5	9.0	102
21...	1010	3.6	1040	6.80	23.0	9.6	110

03301950 SPRING DITCH AT PRIVATE DRIVE NEAR OKOLONA, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°09'27",long 85°40'57", Jefferson County, Hydrologic Unit 05140102, at bridge on Private Drive, and at mile 1.0.

DRAINAGE AREA.--1.6 mi^2.

PERIOD OF RECORD.--February 1988 to current year.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
04...	0925	0.76	657	7.70	13.5	--	--
18...	0910	2.5	524	7.64	17.0	4.1	43
NOV							
01...	0840	0.49	916	7.53	8.0	7.3	62
15...	0848	0.85	722	7.60	11.0	6.4	58
30...	0930	1.6	572	7.67	8.0	7.8	65
DEC							
13...	0915	0.52	872	7.18	4.0	9.5	73
JAN							
04...	0900	1.5	680	7.70	6.0	8.5	69
18...	0910	3.5	550	7.70	7.0	8.8	73
31...	0850	1.2	723	7.67	8.0	9.5	80
FEB							
14...	0930	48	221	7.80	9.0	10.0	87
28...	0910	4.0	319	7.30	6.5	9.8	80
MAR							
09...	0900	5.5	506	7.76	7.0	12.2	99
23...	0845	6.1	485	7.58	10.0	14.8	129
APR							
06...	0905	6.0	489	8.30	9.5	7.4	64
18...	0900	2.3	563	6.92	13.5	8.0	75
MAY							
05...	0920	5.5	446	7.67	16.5	7.8	79
18...	0910	1.5	592	7.50	17.0	9.0	92
JUN							
02...	0920	0.70	700	7.07	23.0	9.4	107
15...	0910	11	295	7.34	20.5	6.2	68
27...	0915	0.71	694	7.30	24.0	10.5	123
JUL							
10...	0940	0.67	680	7.04	26.0	13.2	160
27...	0940	1.1	643	7.62	24.5	11.0	131
AUG							
10...	0830	0.60	752	7.20	18.0	7.4	77
24...	0905	4.6	404	7.30	25.0	5.4	65
SEP							
13...	0900	0.60	646	7.16	21.0	9.7	106
21...	0900	0.28	742	6.60	20.5	--	--

03302000 POND CREEK NEAR LOUISVILLE, KY

LOCATION.--Lat 38°07'11", long 85°47'45", Jefferson County, Hydrologic Unit 05140102, on upstream side of bridge on Manslick Road, right bank, 0.4 mi south of Third Street Road, 0.6 mi downstream from Bee Lick Creek, 1.5 mi downstream from confluence of Northern and Southern Ditches, 2.4 mi south of Louisville city limits, and at mile 15.4.

DRAINAGE AREA.--64.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1944 to current year.

REVISED RECORDS.--WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 430.38 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1961, water-stage recorder at site 300 ft downstream at datum 4.00 ft higher. Oct. 1, 1961 to Nov. 16, 1962, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Records include small amount of inflow diverted by manufacturing plants from Louisville water supply, which is pumped from Ohio River.

AVERAGE DISCHARGE.--45 years, 89.0 ft^3/s, 18.88 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,020 ft^3/s, Mar. 9, 1964, gage height, 22.69 ft; no flow Sept. 19, 20, Oct. 29, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1937 reached a stage of about 23 ft present datum, backwater from Ohio River, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0800	1,730	13.15	Mar. 5	1000	1,460	11.79
Dec. 28	1100	1,600	12.48	Mar. 6	0330	1,390	11.47
Jan. 8	0400	1,350	11.27	Mar. 31	0700	1,550	12.23
Jan. 14	2000	1,770	13.34	Apr. 4	0500	*5,130	*20.83
Feb. 3	0900	2,220	15.30	May 9	1600	1,460	11.81
Feb. 14	0430	3,960	19.68	July 11	2230	1,430	11.67
Feb. 15	0930	3,030	17.95	July 19	2130	2,360	15.84

Minimum daily discharge, 4.5 ft^3/s, Oct. 10, 14.

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.3	24	138	27	51	246	23	15	21	108	85
2	18	11	20	73	115	48	138	23	14	50	28	52
3	13	11	18	59	1580	41	306	25	21	83	20	18
4	9.7	86	17	43	365	37	3090	26	151	47	17	13
5	6.7	204	15	68	178	869	392	98	108	29	15	13
6	5.8	60	16	430	113	840	193	116	30	18	80	13
7	5.1	35	15	144	77	238	251	45	19	14	29	12
8	4.7	22	14	641	59	141	349	31	15	11	19	11
9	4.7	16	13	140	43	103	186	614	161	10	15	11
10	4.5	102	13	90	57	82	114	235	38	12	12	106
11	5.1	39	12	128	40	74	87	96	22	320	9.9	20
12	4.8	18	10	383	33	63	70	65	283	456	9.0	15
13	8.2	22	12	155	1070	113	57	48	255	52	8.1	19
14	4.5	18	12	651	2480	90	48	36	175	23	7.9	48
15	11	16	13	499	2360	71	46	96	114	16	8.1	31
16	7.5	19	11	164	1280	43	38	43	64	12	44	16
17	8.7	18	13	106	330	40	30	28	35	12	60	13
18	14	13	11	82	208	50	36	24	24	12	30	13
19	15	474	12	60	152	33	66	24	51	676	28	10
20	9.3	872	13	48	257	299	28	170	202	732	23	10
21	24	118	128	35	989	566	23	41	52	89	71	10
22	21	66	35	31	304	158	22	30	26	52	44	10
23	44	44	214	29	163	105	23	319	24	32	154	35
24	29	30	423	27	114	82	23	67	27	25	153	16
25	17	24	121	25	95	67	20	40	15	22	35	11
26	11	72	64	70	90	53	19	114	14	17	23	11
27	8.6	259	51	55	73	46	179	43	12	16	20	10
28	17	64	862	35	63	40	38	25	14	17	18	7.1
29	12	36	173	31	---	130	83	20	11	14	16	8.0
30	8.8	26	98	34	---	286	31	18	8.7	41	15	8.5
31	7.7	---	68	30	---	930	---	17	---	291	13	---
TOTAL	373.4	2803.3	2521	4504	12715	5789	6232	2600	2000.7	3222	1133.0	655.6
MEAN	12.0	93.4	81.3	145	454	187	208	83.9	66.7	104	36.5	21.9
MAX	44	872	862	651	2480	930	3090	614	283	732	154	106
MIN	4.5	8.3	10	25	27	33	19	17	8.7	10	7.9	7.1
CFSM	.19	1.46	1.27	2.27	7.10	2.92	3.25	1.31	1.04	1.62	.57	.34
IN.	.22	1.63	1.47	2.62	7.39	3.36	3.62	1.51	1.16	1.87	.66	.38

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CAL YR 1988   TOTAL 25475.5  MEAN  69.6  MAX 2170  MIN 2.8  CFSM 1.09  IN. 14.81
WTR YR 1989   TOTAL 44549.0  MEAN 122    MAX 3090  MIN 4.5  CFSM 1.91  IN. 25.89
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03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1988 to current year.
pH: May 1988 to current year.
WATER TEMPERATURE: May 1988 to current year.
DISSOLVED OXYGEN: June 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1988.

REMARKS.--Water-quality samples were collected biweekly. Records good for specific conductance, pH, water temperature. Records fair for dissolved oxygen.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1200 microsiemens, Nov. 4, 1988; minimum, 129 microsiemens, Mar. 6, 1989.
pH: Maximum, 9.7 units, Aug. 23, 1988; minimum, 4.8 units, Sept. 12, 1988.
WATER TEMPERATURE: Maximum, 34.0°C, July 15-17 and Aug. 2, 4, and 16, 1988; minimum, 0.9°C, Dec. 17, 18, 1988.
DISSOLVED OXYGEN: Maximum, 14.9 mg/L, Aug. 5, 1989; minimum, 1.2 mg/L, July 11, 1988.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 1200 microsiemens, Nov. 4; minimum, 129 microsiemens, Mar. 6.
pH: Maximum, 9.6 units, Nov. 29; minimum, 6.2 units, June 6.
WATER TEMPERATURE: Maximum, 33.7°C, July 10; minimum, 0.9°C, Dec. 17, 18.
DISSOLVED OXYGEN: Maximum, 14.9 mg/L, Aug. 5; minimum, 3.4 mg/L, Aug. 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
03...	1100	13	736	7.80	19.0	4.8	53
17...	1110	8.3	840	8.45	15.0	8.3	83
31...	0840	7.0	1040	7.91	7.0	11.0	90
NOV							
14...	1253	16	560	8.10	11.0	8.4	77
29...	1015	31	666	8.26	4.0	10.4	78
DEC							
12...	1400	11	851	8.85	2.0	14.7	106
JAN							
03...	1310	55	711	7.80	5.5	7.4	60
17...	1310	96	560	8.00	6.0	10.5	85
30...	1030	36	633	7.53	8.0	9.2	78
FEB							
13...	1430	735	312	7.70	5.0	11.4	90
27...	1035	67	341	7.15	5.0	8.8	69
MAR							
13...	1100	87	556	8.89	9.0	9.3	80
27...	1105	49	558	8.10	16.0	8.5	85
APR							
10...	1320	107	336	7.75	9.5	10.0	85
24...	1050	30	607	7.36	15.0	6.8	66
MAY							
08...	1240	30	464	7.35	15.0	7.8	76
22...	1300	27	528	7.50	21.0	5.3	60
JUN							
05...	1345	187	400	7.58	22.5	4.6	52
16...	1430	56	523	7.70	19.5	6.1	66
JUL							
03...	1100	105	441	7.20	23.0	6.8	79
17...	1130	12	590	7.80	25.0	7.4	88
31...	1100	43	765	7.80	25.0	5.2	64
AUG							
14...	1030	8.6	808	8.50	25.0	6.0	73
28...	1140	16	680	7.83	27.0	5.6	69
SEP							
06...	1130	15	605	8.13	28.5	6.1	77
25...	1345	15	583	7.70	16.5	8.7	93

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	856	773	803	1100	880	946	792	694	762	513	472	487
2	836	737	795	1030	890	948	857	756	793	511	479	496
3	802	660	729	1130	1000	1090	905	771	824	799	489	609
4	754	647	676	1200	480	955	909	810	888	811	689	763
5	847	756	816	530	400	464	895	713	773	816	386	747
6	914	842	858	600	500	558	920	777	854	420	287	356
7	1000	920	974	620	590	609	925	874	898	523	313	499
8	1000	911	932	710	600	649	1030	896	963	387	214	318
9	---	---	---	790	700	730	1000	885	923	429	377	407
10	---	---	---	800	600	677	908	820	880	504	420	466
11	---	---	---	630	600	616	943	820	888	527	504	520
12	---	---	---	690	610	643	897	807	833	518	409	438
13	1000	690	850	710	690	701	846	816	829	504	431	451
14	---	---	---	709	610	660	1110	845	1020	517	218	452
15	---	---	---	808	679	753	943	903	925	442	238	364
16	---	---	---	796	756	779	942	910	927	525	422	464
17	984	922	952	805	704	767	940	888	912	557	525	540
18	958	743	871	803	772	787	1040	898	973	627	537	601
19	1000	751	958	782	171	396	1030	805	901	646	617	632
20	1000	920	964	370	199	275	833	703	748	656	626	643
21	958	731	866	457	358	387	883	481	606	706	626	641
22	821	690	722	495	446	469	629	501	573	715	625	667
23	752	510	654	543	465	497	619	398	452	635	625	627
24	563	501	527	561	542	551	527	376	436	745	625	700
25	753	560	684	571	550	561	484	395	429	735	714	724
26	833	741	772	579	468	558	522	484	503	744	614	694
27	933	823	889	487	456	472	580	492	533	654	554	611
28	952	799	872	486	454	475	580	319	402	754	623	679
29	848	780	813	685	453	572	466	387	408	743	623	663
30	1020	789	897	770	656	705	505	416	478	653	629	640
31	1130	1020	1060	---	---	---	514	495	511	743	697	724
MONTH	---	---	---	1200	171	642	1110	319	737	816	214	568

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	738	679	709	460	420	438	499	432	464	---	---	---
2	725	390	651	460	420	441	549	501	520	---	---	---
3	399	282	315	460	420	446	562	480	544	---	---	---
4	401	293	363	460	430	444	470	418	438	---	---	---
5	401	366	381	460	130	207	531	468	499	---	---	---
6	462	386	417	160	129	148	570	536	552	---	---	---
7	478	443	459	239	149	204	588	567	574	---	---	---
8	471	434	441	259	229	243	595	576	586	---	---	---
9	507	434	453	259	229	240	583	574	576	462	205	315
10	495	429	444	249	229	242	597	583	587	349	239	295
11	506	431	463	532	445	478	615	596	606	399	348	372
12	495	426	453	551	484	509	626	613	620	439	399	416
13	426	198	336	563	478	527	654	625	638	450	432	439
14	816	136	381	522	465	481	654	651	652	460	444	452
15	561	176	272	521	447	489	---	---	---	461	403	421
16	206	172	191	770	432	507	---	---	---	491	430	460
17	276	190	247	623	551	588	---	---	---	588	501	549
18	293	259	279	666	526	608	---	---	---	681	562	602
19	285	257	272	579	538	550	---	---	---	703	499	641
20	340	248	312	640	303	475	---	---	---	633	293	400
21	267	163	205	381	300	334	---	---	---	510	454	476
22	257	220	235	433	383	407	---	---	---	621	503	523
23	265	231	250	470	426	450	---	---	---	551	238	334
24	315	239	277	502	469	485	---	---	---	535	418	474
25	340	313	324	524	491	508	---	---	---	596	537	571
26	347	329	339	521	503	511	---	---	---	597	505	547
27	440	230	357	637	504	549	---	---	---	553	505	521
28	460	420	444	656	607	630	---	---	---	553	534	543
29	---	---	---	645	454	554	---	---	---	653	553	573
30	---	---	---	482	442	461	---	---	---	663	573	603
31	---	---	---	475	403	422	---	---	---	748	582	668
MONTH	816	136	367	770	129	438	---	---	---	---	---	---

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	730	698	713	648	550	628	773	591	665	753	611	715
2	808	618	678	540	432	496	850	773	816	610	503	538
3	789	517	724	484	430	443	892	838	866	570	503	524
4	468	277	353	515	482	493	913	868	888	598	570	586
5	445	346	404	570	507	534	973	919	945	613	597	604
6	544	429	491	658	572	616	925	716	807	614	599	607
7	585	391	504	672	637	654	737	692	707	708	607	655
8	477	405	443	669	624	640	792	717	763	731	705	719
9	588	368	423	649	621	636	894	781	817	731	682	711
10	579	425	494	651	605	635	913	870	886	702	440	512
11	572	521	541	629	418	581	951	913	927	562	452	486
12	581	303	468	449	401	421	942	877	913	586	561	568
13	471	307	374	514	450	485	967	923	949	695	584	643
14	467	310	388	549	514	528	923	876	900	675	517	621
15	498	453	478	597	550	570	876	808	833	588	518	554
16	605	499	542	611	593	602	862	709	837	586	515	540
17	624	571	598	610	588	598	721	565	600	658	589	638
18	585	546	567	793	567	666	676	588	614	652	631	640
19	574	344	485	753	137	469	807	652	708	633	621	628
20	486	387	435	477	185	349	805	759	772	680	621	642
21	557	435	507	574	475	525	766	611	713	757	681	710
22	598	518	563	599	552	571	631	586	602	767	736	756
23	628	528	584	612	569	589	641	476	596	748	676	704
24	567	516	536	735	613	648	548	446	486	679	607	627
25	626	566	599	802	744	781	639	549	609	621	579	601
26	600	560	574	805	751	779	690	638	664	675	621	642
27	650	596	620	937	792	864	697	667	680	794	666	744
28	670	650	661	921	861	895	695	678	684	846	753	782
29	670	589	627	928	677	845	676	663	668	905	815	862
30	649	629	639	919	776	875	747	664	689	926	785	851
31	---	---	---	812	591	705	756	744	748	---	---	---
MONTH	808	277	534	937	137	617	973	446	753	926	440	647

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.5	7.9	8.2	7.9	7.7	7.8	8.5	8.3	8.4	8.0	7.7	7.8
2	7.8	7.4	7.6	8.3	7.8	8.1	8.6	8.5	8.5	7.8	7.7	7.8
3	8.2	7.3	7.7	8.2	7.9	8.0	8.7	8.5	8.6	8.2	7.7	7.9
4	8.1	7.9	8.0	8.0	7.3	7.7	8.6	8.5	8.6	8.4	8.0	8.1
5	7.9	7.7	7.8	7.3	7.2	7.2	8.7	8.6	8.7	8.4	8.0	8.2
6	7.9	7.6	7.8	7.5	7.3	7.4	8.8	8.6	8.7	8.1	7.7	7.8
7	7.7	7.4	7.6	7.5	7.4	7.5	8.8	8.6	8.7	8.1	7.8	8.0
8	7.4	6.8	7.1	7.6	7.4	7.5	8.7	8.7	8.7	8.0	7.7	7.8
9	6.8	6.4	6.6	7.6	7.6	7.6	8.8	8.7	8.7	8.1	8.0	8.0
10	8.3	6.3	7.4	7.7	7.2	7.5	9.1	8.7	8.9	8.3	8.1	8.2
11	8.4	7.8	8.2	7.4	7.2	7.3	9.0	8.7	8.8	8.3	8.0	8.2
12	8.5	8.1	8.2	7.5	7.4	7.4	8.8	8.8	8.8	8.0	7.8	7.8
13	8.5	7.7	8.2	7.4	7.3	7.4	8.9	8.7	8.8	8.0	7.8	8.0
14	8.3	7.7	8.0	7.5	7.4	7.4	8.8	8.7	8.7	8.1	7.7	7.9
15	8.6	8.2	8.4	7.6	7.5	7.6	8.7	8.5	8.6	7.9	7.5	7.8
16	8.7	8.4	8.5	7.6	7.4	7.6	8.6	8.4	8.5	7.9	7.8	7.9
17	8.5	8.0	8.4	7.7	7.5	7.6	8.6	8.5	8.5	8.0	7.9	8.0
18	8.3	8.0	8.2	7.9	7.7	7.8	8.5	8.3	8.5	8.0	7.9	8.0
19	8.4	8.0	8.1	7.9	7.5	7.7	8.3	8.2	8.3	7.9	7.7	7.8
20	8.3	8.0	8.1	7.7	7.5	7.6	8.2	7.9	8.1	7.8	7.7	7.7
21	8.1	7.7	7.9	7.9	7.7	7.8	8.0	7.8	7.9	7.8	7.6	7.7
22	7.7	7.6	7.7	7.9	7.8	7.8	8.0	7.9	8.0	7.7	7.6	7.7
23	7.8	7.5	7.7	7.9	7.8	7.9	8.0	7.7	7.8	7.7	7.6	7.7
24	7.5	7.3	7.4	8.0	7.9	8.0	7.9	7.6	7.8	7.6	7.6	7.6
25	7.5	7.4	7.5	8.1	8.0	8.0	8.1	7.9	8.0	7.6	7.4	7.5
26	7.5	7.5	7.5	8.1	7.7	8.0	7.9	7.8	7.9	7.6	7.5	7.5
27	7.5	7.5	7.5	7.9	7.6	7.8	8.0	8.0	8.0	7.7	7.5	7.5
28	7.6	7.3	7.5	8.2	7.9	8.1	8.0	7.6	7.8	7.7	7.5	7.6
29	7.5	7.4	7.4	9.6	8.2	8.3	8.0	7.9	8.0	7.7	7.5	7.6
30	7.5	7.4	7.4	8.4	8.3	8.4	8.0	7.9	7.9	8.6	7.5	7.8
31	7.7	7.4	7.6	---	---	---	8.0	7.9	8.0	8.5	7.9	8.2
MONTH	8.7	6.3	7.8	9.6	7.2	7.7	9.1	7.6	8.4	8.6	7.4	7.8

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.6	8.0	8.3	8.0	7.6	7.7	7.7	6.7	7.1	7.9	7.5	7.6
2	8.6	7.6	8.1	8.4	7.9	8.1	8.0	7.2	7.5	7.8	7.4	7.6
3	7.6	7.3	7.4	8.7	7.9	8.2	7.9	7.4	7.6	8.1	7.4	7.8
4	7.8	7.5	7.6	8.6	8.2	8.3	7.5	6.9	7.1	8.1	7.5	7.8
5	7.8	7.6	7.7	8.4	7.8	8.0	7.5	7.1	7.3	7.6	7.0	7.2
6	7.9	7.7	7.8	8.4	8.0	8.2	7.8	7.4	7.6	7.1	6.8	6.9
7	8.0	7.8	7.9	8.5	8.2	8.4	7.8	7.6	7.7	7.5	6.8	7.1
8	8.2	7.9	8.0	8.3	8.2	8.3	7.8	7.6	7.7	7.5	7.1	7.4
9	8.2	7.9	8.1	8.4	8.2	8.3	7.7	7.6	7.7	7.6	6.6	7.1
10	8.2	7.9	8.1	8.7	8.4	8.6	7.8	7.7	7.7	7.2	6.7	6.9
11	8.3	8.0	8.1	8.9	8.6	8.8	7.7	7.3	7.5	7.4	7.0	7.2
12	8.4	8.1	8.2	8.9	8.6	8.8	7.4	7.1	7.3	7.5	7.2	7.3
13	8.4	7.5	7.9	8.9	8.6	8.8	7.1	6.8	6.9	7.6	7.3	7.4
14	7.6	7.4	7.5	8.8	8.4	8.5	6.8	6.6	6.8	7.7	7.4	7.5
15	7.6	7.4	7.5	8.8	8.5	8.6	---	---	---	7.8	7.2	7.4
16	7.4	7.4	7.4	9.0	7.8	8.6	---	---	---	7.8	7.4	7.5
17	7.6	7.4	7.5	8.9	8.3	8.6	---	---	---	7.9	7.5	7.6
18	7.6	7.5	7.6	8.9	8.1	8.4	---	---	---	8.0	7.5	7.7
19	7.5	7.3	7.4	8.8	8.0	8.3	---	---	---	7.9	7.5	7.7
20	7.4	7.0	7.3	8.8	7.5	8.1	---	---	---	7.9	7.1	7.4
21	7.0	6.7	6.9	7.8	7.4	7.6	---	---	---	7.8	7.3	7.5
22	6.9	6.7	6.8	8.2	7.6	7.9	---	---	---	7.9	7.4	7.6
23	7.0	6.8	6.9	8.1	7.6	7.9	---	---	---	7.5	6.8	7.1
24	7.1	6.9	7.0	8.1	7.5	7.8	---	---	---	7.6	7.1	7.3
25	7.0	6.8	6.9	8.1	7.6	7.8	---	---	---	7.6	7.4	7.4
26	6.9	6.8	6.9	8.6	7.7	8.0	8.8	8.3	8.5	7.4	7.2	7.3
27	7.8	6.9	7.3	8.6	8.1	8.4	8.6	7.5	7.8	7.4	7.1	7.2
28	7.9	7.5	7.7	8.6	8.0	8.3	8.1	7.8	7.9	7.3	6.9	7.0
29	---	---	---	8.6	7.2	7.9	8.2	7.6	7.8	6.9	6.6	6.7
30	---	---	---	7.2	7.0	7.1	7.9	7.5	7.7	8.0	6.6	7.0
31	---	---	---	7.1	6.7	6.8	---	---	---	8.1	7.4	7.7
MONTH	8.6	6.7	7.6	9.0	6.7	8.2	---	---	---	8.1	6.6	7.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.8	7.5	7.7	7.8	7.2	7.6	8.0	7.5	7.7	8.1	7.4	7.8
2	7.8	7.3	7.6	7.1	6.8	7.0	8.3	7.8	8.0	7.6	7.2	7.4
3	8.0	7.5	7.7	7.2	6.8	7.0	8.3	8.0	8.1	7.6	7.4	7.5
4	7.8	7.3	7.5	7.1	6.9	7.0	8.2	8.0	8.2	7.7	7.5	7.6
5	7.6	7.2	7.5	7.2	6.8	7.0	8.4	8.1	8.2	8.0	7.6	7.8
6	7.6	6.2	7.3	7.9	7.0	7.1	8.4	7.6	7.9	8.3	7.9	8.1
7	7.6	7.3	7.4	7.9	7.6	7.8	8.0	7.6	7.8	8.3	7.9	8.1
8	7.4	7.1	7.2	8.3	7.8	7.9	8.1	7.7	7.9	8.1	7.9	8.0
9	7.2	6.8	7.0	8.5	8.1	8.2	8.2	8.0	8.1	8.4	8.0	8.2
10	7.0	6.8	6.9	8.6	8.2	8.4	8.2	8.0	8.1	8.5	7.5	7.7
11	7.0	6.8	6.9	8.7	6.8	8.1	8.2	8.1	8.2	7.9	7.5	7.7
12	7.1	6.8	6.9	7.2	6.7	7.0	8.3	8.1	8.2	8.0	7.6	7.8
13	7.0	6.6	6.8	7.2	7.0	7.1	8.2	7.9	8.1	8.6	7.7	8.1
14	7.0	6.8	6.9	7.4	7.0	7.2	8.1	7.9	8.0	8.6	7.5	8.2
15	7.1	6.9	7.0	7.5	7.1	7.3	7.9	7.8	7.9	7.5	7.3	7.4
16	7.7	6.9	7.3	7.6	7.2	7.4	8.0	7.4	7.9	7.7	7.3	7.4
17	7.9	7.6	7.8	8.4	7.5	7.9	7.4	7.1	7.2	7.8	7.6	7.7
18	8.0	7.7	7.9	8.5	8.1	8.3	7.5	7.1	7.3	8.1	7.7	7.9
19	8.2	7.3	7.7	8.5	6.9	7.5	7.6	7.3	7.4	8.1	7.7	7.9
20	7.6	7.2	7.4	7.1	6.8	7.0	7.6	7.4	7.5	8.0	7.8	8.0
21	7.5	7.2	7.3	7.1	6.9	7.0	7.5	7.0	7.3	8.1	7.9	8.0
22	7.4	7.1	7.3	7.4	6.9	7.1	7.4	7.1	7.2	8.0	7.8	7.9
23	7.5	6.8	7.1	7.4	7.2	7.3	7.4	7.2	7.4	7.9	7.4	7.6
24	7.2	6.6	6.8	7.8	7.3	7.5	7.5	7.0	7.3	7.8	7.3	7.5
25	7.9	7.0	7.4	8.0	7.6	7.8	7.6	7.4	7.5	7.8	7.6	7.6
26	7.8	7.4	7.6	8.2	7.9	8.0	7.6	7.4	7.5	7.9	7.5	7.7
27	7.8	7.3	7.5	8.5	7.9	8.2	7.7	7.4	7.5	8.1	7.8	7.9
28	7.6	7.1	7.4	8.5	8.3	8.4	8.0	7.7	7.8	7.8	7.5	7.6
29	7.6	7.3	7.4	8.5	8.1	8.4	8.1	8.0	8.0	7.7	7.5	7.6
30	7.6	7.3	7.5	8.6	8.0	8.4	8.2	8.0	8.1	7.5	7.1	7.3
31	---	---	---	8.0	7.5	7.8	8.2	8.0	8.1	---	---	---
MONTH	8.2	6.2	7.3	8.7	6.7	7.6	8.4	7.0	7.8	8.6	7.1	7.8

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.4	21.2	21.9	11.5	9.5	10.4	6.2	3.8	5.0	6.0	4.5	5.2
2	23.2	20.1	21.6	11.1	8.6	9.9	4.7	2.2	3.5	5.0	4.4	4.7
3	22.5	17.5	19.7	11.8	8.7	9.9	7.0	2.8	4.6	5.7	4.3	5.0
4	19.9	15.6	17.1	15.8	11.7	13.8	7.0	4.5	5.6	4.9	2.9	3.8
5	16.5	13.6	14.9	14.7	11.8	13.5	5.6	2.7	4.3	4.9	2.3	3.4
6	14.9	13.2	14.2	11.7	8.0	9.5	6.6	3.1	4.7	7.7	4.5	6.0
7	15.4	13.3	14.3	11.0	7.4	9.1	8.4	5.4	6.8	12.7	6.6	8.4
8	15.0	13.4	14.4	13.9	10.5	12.0	8.2	6.4	7.0	13.3	6.2	9.5
9	15.0	13.6	14.4	13.7	9.4	11.3	6.5	4.5	5.4	6.3	4.9	5.6
10	15.2	13.0	14.1	15.7	13.7	14.9	4.6	2.1	3.1	6.5	3.8	5.2
11	15.8	14.0	14.9	13.6	10.2	11.5	3.7	1.7	2.4	7.1	4.9	5.8
12	15.1	12.7	13.7	11.2	8.2	9.3	2.1	1.2	1.6	10.0	7.1	9.0
13	15.4	9.4	12.6	13.4	10.3	11.7	3.0	1.1	1.9	8.6	6.1	7.1
14	14.4	12.5	13.5	12.8	8.9	10.9	7.4	2.4	4.2	6.7	4.2	5.1
15	15.9	12.9	14.3	14.8	9.7	11.7	7.5	5.3	6.1	6.7	5.3	6.1
16	15.9	14.2	15.0	16.1	12.8	15.1	5.8	1.9	3.3	7.7	5.3	6.6
17	18.1	14.6	16.0	12.7	9.1	10.4	2.2	.9	1.6	7.5	4.9	6.3
18	18.7	17.6	18.4	9.6	6.2	7.9	1.8	.9	1.5	8.1	5.4	6.9
19	17.1	13.6	15.2	10.6	8.4	9.2	5.2	1.1	2.5	8.3	5.4	7.1
20	15.7	12.6	13.6	12.1	10.6	11.7	9.1	5.1	6.6	7.4	4.4	6.0
21	13.7	12.6	13.2	10.6	8.8	9.6	10.6	8.5	9.8	5.3	2.2	3.7
22	14.6	11.1	12.7	9.3	6.4	8.0	8.4	6.5	7.1	5.8	2.1	3.8
23	13.6	10.2	11.4	8.7	5.8	7.3	10.9	8.3	10.0	6.2	2.7	4.5
24	12.1	8.7	10.4	8.9	5.7	7.2	11.3	8.5	10.2	7.1	5.5	6.1
25	11.8	8.7	10.1	10.1	6.1	7.8	9.8	6.7	7.9	12.0	7.1	9.2
26	11.7	8.2	10.0	12.2	9.2	10.4	6.4	4.2	5.3	11.5	8.9	10.7
27	11.6	8.2	9.7	12.2	9.2	11.2	10.2	4.7	7.0	8.7	5.3	7.0
28	13.9	11.7	12.8	9.2	5.1	7.1	10.2	4.6	6.9	8.3	4.5	6.4
29	13.2	8.8	10.6	6.5	3.1	4.8	4.7	2.7	4.0	8.5	7.5	7.9
30	11.4	9.9	10.3	6.6	4.6	5.5	5.4	3.5	4.5	9.5	8.0	8.6
31	9.9	8.2	9.1	---	---	---	5.1	3.4	4.4	10.6	6.0	8.1
MONTH	23.2	8.2	14.0	16.1	3.1	10.1	11.3	.9	5.1	13.3	2.1	6.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.3	8.3	10.2	7.2	3.1	5.3	14.4	7.9	10.8	22.3	18.4	19.5
2	11.5	8.6	10.7	7.7	4.1	5.9	13.9	10.9	12.5	18.9	16.0	17.4
3	8.7	5.3	6.4	12.3	6.6	9.0	15.8	12.4	13.8	21.6	13.6	17.1
4	5.8	4.8	5.3	15.2	10.7	12.6	15.5	14.4	14.8	19.8	15.7	17.9
5	5.7	4.9	5.3	14.3	5.7	9.4	14.3	11.3	12.9	19.0	16.9	17.8
6	5.2	2.2	3.9	5.7	4.3	5.0	13.9	9.8	12.1	18.0	14.2	16.0
7	4.5	1.8	3.2	4.9	2.9	4.1	14.7	10.3	12.4	19.3	12.2	15.1
8	5.2	2.0	3.5	7.4	3.2	5.1	13.7	9.3	10.7	19.9	13.9	16.6
9	2.8	1.2	1.8	10.3	5.0	7.5	11.3	7.3	9.2	18.5	14.5	15.8
10	4.0	1.3	2.3	10.3	6.4	8.5	12.3	7.8	10.1	18.0	12.9	15.3
11	7.7	2.9	4.9	12.9	7.0	9.9	13.3	7.6	10.4	17.5	14.5	16.1
12	8.4	4.2	6.2	12.1	10.0	11.2	14.8	8.8	11.7	18.5	13.5	16.0
13	6.9	3.9	5.6	11.6	9.0	10.4	16.8	11.1	13.7	16.9	14.5	15.5
14	7.7	6.8	7.3	14.1	10.0	11.9	14.7	11.7	13.4	19.5	14.0	16.3
15	8.0	6.6	7.2	14.1	10.5	12.5	---	---	---	20.0	16.4	18.0
16	9.1	7.0	7.9	13.1	7.0	10.1	---	---	---	23.0	16.0	19.1
17	8.0	6.0	6.9	15.6	8.9	12.0	---	---	---	24.0	16.9	20.4
18	8.7	5.2	6.9	15.0	9.1	12.9	---	---	---	22.5	18.5	20.4
19	9.7	6.0	7.7	12.1	6.6	9.2	---	---	---	21.5	19.0	20.3
20	8.6	7.5	7.9	10.6	7.7	8.9	---	---	---	24.0	18.0	20.7
21	8.5	7.4	8.3	8.3	6.7	7.4	---	---	---	27.5	20.5	23.7
22	7.3	5.2	6.2	10.8	4.8	7.6	---	---	---	25.0	19.8	21.7
23	5.1	2.6	4.1	11.2	6.8	9.2	---	---	---	21.8	16.8	19.0
24	5.5	1.3	3.5	16.4	10.4	13.0	---	---	---	24.4	19.3	21.6
25	7.3	2.8	5.1	17.3	12.4	14.7	---	---	---	23.4	21.4	22.4
26	8.7	6.1	7.3	19.6	13.4	16.4	28.2	20.6	23.9	24.4	20.9	22.7
27	7.2	4.6	5.9	18.6	15.1	17.0	26.1	19.8	22.6	26.5	21.4	23.8
28	7.6	3.0	5.3	21.4	16.5	18.7	27.0	21.8	24.4	25.5	19.5	22.6
29	---	---	---	19.9	17.5	18.5	26.0	21.1	23.6	27.5	21.0	24.0
30	---	---	---	17.5	14.8	15.9	24.7	20.6	22.6	29.4	23.0	26.1
31	---	---	---	14.4	9.3	11.0	---	---	---	29.6	24.6	27.2
MONTF	12.3	1.2	6.0	21.4	2.9	10.7	---	---	---	29.6	12.2	19.6

SALT RIVER BASIN

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	30.6	25.6	28.2	30.3	26.8	28.1	29.4	25.0	26.7	29.3	24.5	27.1
2	30.1	26.1	28.2	26.8	23.1	25.0	31.5	25.5	28.3	28.5	23.5	25.5
3	28.7	25.1	27.1	26.0	22.5	23.9	32.1	26.5	29.2	27.0	23.6	25.5
4	26.7	22.2	24.2	28.0	24.8	26.0	32.1	27.5	29.9	26.6	22.2	24.3
5	25.7	21.3	22.8	29.9	24.8	27.0	32.9	28.5	30.7	28.3	24.2	26.2
6	25.8	19.7	22.3	31.6	26.3	28.7	31.6	25.0	27.2	28.9	25.7	27.6
7	28.5	21.2	24.5	33.1	28.1	30.7	27.1	22.1	24.9	29.3	26.3	28.2
8	26.9	22.9	24.6	33.0	28.3	30.9	26.4	20.5	23.4	29.4	26.8	28.3
9	25.1	21.0	23.3	33.0	29.2	31.4	26.6	21.5	24.2	29.8	27.4	28.8
10	26.7	21.2	23.8	33.7	29.2	31.5	27.1	22.5	25.3	29.3	24.7	26.1
11	27.8	21.2	24.4	33.1	25.1	30.0	26.9	23.5	25.6	27.2	24.1	25.5
12	26.3	21.9	24.1	28.5	24.9	26.5	26.5	23.9	25.4	26.8	23.2	25.1
13	24.9	20.9	22.5	28.4	26.3	27.2	27.6	24.0	26.0	28.6	23.1	25.7
14	23.9	21.6	22.6	28.8	24.2	26.5	28.6	25.0	27.0	28.2	22.8	25.1
15	22.5	20.1	21.4	27.5	24.0	25.8	28.6	25.5	27.4	22.8	20.7	21.5
16	22.1	17.3	19.6	28.5	23.4	26.2	29.6	25.5	27.4	23.2	20.1	21.2
17	24.4	18.0	22.0	28.7	23.8	26.4	26.5	23.4	24.9	23.7	20.6	22.3
18	25.7	21.1	23.8	29.1	23.2	26.4	26.1	23.5	24.8	24.0	20.2	22.5
19	25.9	21.9	23.8	29.0	22.7	24.7	27.4	22.5	24.5	24.0	20.2	22.3
20	25.4	21.8	24.0	24.8	22.1	23.4	27.1	23.9	25.1	23.2	21.0	22.4
21	28.4	23.1	25.8	27.8	22.2	24.8	25.6	23.9	24.7	26.2	22.6	24.3
22	31.3	24.1	28.3	29.9	24.6	26.8	30.4	23.5	26.3	26.2	24.1	25.6
23	31.8	26.1	28.5	30.9	25.8	28.3	29.6	25.4	27.5	24.1	19.0	21.2
24	32.0	25.9	29.1	31.7	26.3	28.9	27.1	23.6	25.2	18.9	15.0	17.0
25	33.0	27.4	30.4	33.3	26.8	29.9	28.0	25.1	26.4	18.5	15.5	17.0
26	33.6	28.2	31.1	33.0	28.0	30.7	29.1	25.5	27.1	17.6	14.0	16.4
27	30.9	28.9	30.0	32.8	28.4	30.8	30.1	25.6	27.8	17.8	11.6	16.4
28	30.1	26.9	28.7	31.9	27.9	30.0	30.7	26.5	28.7	17.3	14.9	16.1
29	30.2	26.5	28.7	30.4	25.9	28.3	30.7	27.4	29.1	19.0	17.3	18.4
30	30.8	25.6	28.5	30.1	25.6	27.2	30.2	26.7	28.5	19.8	18.9	19.3
31	---	---	---	26.5	24.0	25.2	29.5	26.3	28.3	---	---	---
MONTH	33.6	17.3	25.5	33.7	22.1	27.7	32.9	20.5	26.7	29.8	11.6	23.1

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.2	5.3	6.2	11.1	10.0	10.6	11.0	10.1	10.6	9.1	7.7	8.3
2	7.0	3.7	5.1	11.8	9.5	10.6	11.6	10.9	11.3	8.6	7.7	8.1
3	8.5	4.0	6.0	11.8	10.1	10.8	11.8	11.2	11.5	8.5	7.4	7.8
4	8.5	6.4	7.4	11.2	6.0	9.0	11.4	11.1	11.2	9.7	7.8	8.4
5	8.6	7.1	7.9	7.0	5.4	6.2	12.2	11.3	11.9	9.6	8.2	8.8
6	8.6	7.5	8.1	9.0	6.9	7.8	12.2	11.8	12.1	8.3	7.5	7.8
7	8.9	7.5	8.1	9.8	8.4	8.9	12.0	11.3	11.6	8.4	7.2	7.8
8	9.1	7.6	8.3	9.8	8.8	9.2	11.8	10.7	11.3	8.1	6.2	7.2
9	9.3	7.8	8.5	10.0	9.0	9.4	12.5	11.8	12.1	9.2	8.1	8.6
10	9.4	7.7	8.5	9.5	6.3	7.6	13.4	12.5	13.1	10.1	8.7	9.2
11	9.4	7.6	8.5	9.6	6.5	7.8	13.6	12.8	13.2	9.8	8.7	9.1
12	10.0	8.1	8.9	9.8	9.4	9.6	14.7	13.2	14.0	8.7	8.2	8.4
13	9.8	8.1	8.7	10.1	8.6	9.3	14.2	13.1	13.8	10.4	8.4	9.3
14	10.3	8.0	8.9	10.5	9.5	10.0	13.5	11.9	13.0	10.6	9.4	9.9
15	9.7	8.7	9.2	10.4	9.3	9.9	12.2	11.1	11.7	10.1	9.8	9.9
16	9.2	8.1	8.7	9.9	7.9	9.0	12.9	11.4	12.2	10.8	9.8	10.2
17	8.7	7.0	8.0	10.9	7.6	9.0	13.8	12.1	13.1	11.1	10.1	10.5
18	8.1	6.3	7.0	12.1	10.4	11.2	13.9	12.7	13.4	11.2	9.9	10.4
19	8.6	6.2	7.3	11.6	5.5	8.6	13.3	12.3	12.9	11.6	9.7	10.4
20	9.0	7.9	8.5	8.3	7.5	8.0	12.1	10.2	11.2	11.6	10.0	10.6
21	8.6	7.0	7.8	9.1	8.0	8.5	10.[illegible]	7.4	8.3	12.4	10.8	11.4
22	9.9	6.5	7.6	9.9	8.7	9.2	9.7	8.0	8.7	12.6	11.0	11.7
23	10.0	7.8	8.7	10.0	9.0	9.4	9.6	7.2	8.0	12.6	10.9	11.7
24	10.0	7.7	8.6	10.2	9.0	9.6	8.3	7.3	7.7	12.5	10.3	11.1
25	10.3	9.6	9.9	10.3	9.7	10.0	9.5	7.4	8.4	13.0	9.9	10.9
26	10.9	9.5	10.2	10.0	8.5	9.4	10.2	8.6	9.2	12.8	8.4	9.5
27	11.2	10.0	10.6	8.7	7.7	8.2	9.9	8.7	9.3	12.8	8.8	10.3
28	11.0	9.1	9.8	10.9	8.6	9.6	9.0	7.8	8.5	13.3	10.4	11.7
29	11.0	9.2	9.9	11.0	10.2	10.5	9.8	8.7	9.1	13.1	9.9	11.0
30	11.3	10.3	10.9	10.8	10.0	10.4	9.7	8.5	9.0	14.0	9.1	11.1
31	11.6	10.4	10.9	---	---	---	9.7	8.2	8.8	14.3	9.6	12.0
MONTH	11.6	3.7	8.5	12.1	5.4	9.2	14.7	7.2	11.0	14.3	6.2	9.8

03302000 POND CREEK NEAR LOUISVILLE, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	14.1	9.1	11.8	---	---	---	11.3	9.2	10.0	6.1	5.1	5.6
2	12.9	8.3	10.1	---	---	---	11.7	8.3	9.7	7.6	5.3	6.2
3	10.6	9.5	10.2	---	---	---	10.6	7.9	9.0	8.5	6.6	7.4
4	11.0	10.4	10.6	---	---	---	8.5	6.8	7.5	8.5	6.5	7.3
5	11.4	10.2	10.7	---	---	---	9.5	7.6	8.6	7.2	5.0	5.8
6	12.8	10.5	11.4	---	---	---	---	---	---	8.1	5.6	6.5
7	13.0	10.9	11.8	---	---	---	---	---	---	8.6	7.5	7.9
8	13.2	10.9	11.9	---	---	---	---	---	---	8.6	7.4	8.0
9	13.6	11.8	12.5	---	---	---	---	---	---	7.8	6.4	7.1
10	13.5	12.1	12.8	---	---	---	---	---	---	8.2	7.0	7.5
11	13.3	11.5	12.3	---	---	---	---	---	---	8.2	6.4	7.2
12	13.9	10.9	12.3	---	---	---	---	---	---	8.2	6.6	7.3
13	13.7	10.9	11.6	---	---	---	---	---	---	8.2	6.4	7.2
14	10.8	10.0	10.3	---	---	---	---	---	---	8.0	7.0	7.5
15	10.8	10.1	10.4	---	---	---	---	---	---	8.2	5.4	6.5
16	10.2	9.8	10.1	---	---	---	6.5	5.8	6.2	7.9	5.9	6.7
17	10.7	9.7	10.2	15.0	9.0	11.8	6.2	5.8	6.0	8.1	6.1	7.0
18	10.7	9.7	10.2	12.8	7.5	9.4	6.2	5.7	6.0	8.1	6.3	7.1
19	10.4	9.5	9.9	---	---	---	6.3	6.1	6.1	7.7	5.7	6.7
20	9.7	9.0	9.2	---	---	---	6.3	5.8	6.1	7.7	4.9	6.3
21	9.2	8.8	9.0	---	---	---	6.2	5.8	6.0	7.1	5.1	6.0
22	10.3	9.1	9.6	---	---	---	6.1	5.7	5.9	7.1	5.0	5.9
23	11.3	9.8	10.5	---	---	---	6.0	5.8	5.9	6.9	5.5	6.2
24	11.4	10.3	10.7	---	---	---	---	---	---	7.1	5.1	6.0
25	10.9	9.6	10.2	---	---	---	---	---	---	6.9	4.3	5.3
26	10.4	8.7	9.4	---	---	---	7.8	4.5	6.3	5.1	3.9	4.5
27	11.3	8.7	9.6	13.4	8.1	10.6	6.5	3.3	4.4	6.0	4.4	5.0
28	---	---	---	11.8	6.8	9.2	5.7	3.6	4.6	6.4	5.2	5.7
29	---	---	---	10.6	6.3	7.4	5.7	3.1	4.4	6.6	5.2	6.0
30	---	---	---	8.9	6.7	7.7	6.0	4.0	4.8	7.7	5.2	6.3
31	---	---	---	9.4	8.6	8.9	---	---	---	8.1	5.1	6.5
MONTH	---	---	---	---	---	---	---	---	---	8.6	3.9	6.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.1	5.3	7.0	11.7	5.3	8.8	6.1	4.9	5.4	8.1	4.1	5.9
2	8.7	5.3	7.0	7.2	4.4	5.8	6.7	5.1	5.8	5.7	3.6	4.4
3	8.5	5.3	7.0	7.2	6.5	6.8	8.3	5.5	6.6	7.3	5.1	5.8
4	6.8	3.8	5.1	7.9	6.0	6.7	10.5	6.1	8.0	8.8	6.1	7.0
5	---	---	---	8.7	5.9	7.2	14.9	5.9	9.6	9.9	6.2	7.7
6	---	---	---	9.9	6.1	7.7	10.9	3.9	5.5	10.2	6.0	8.1
7	---	---	---	11.0	5.9	8.0	9.3	5.3	7.1	10.2	5.6	7.8
8	---	---	---	12.0	6.4	8.7	10.3	7.1	8.4	9.4	5.3	7.5
9	---	---	---	12.1	6.0	8.7	11.1	8.0	9.1	9.9	5.3	7.8
10	---	---	---	12.3	5.9	8.9	11.1	8.1	9.4	9.7	4.3	5.2
11	---	---	---	11.9	4.9	7.6	11.5	7.6	9.5	6.9	4.2	5.2
12	---	---	---	5.6	4.3	5.0	11.7	7.4	9.5	8.8	5.4	6.4
13	---	---	---	6.4	4.9	5.5	11.1	7.0	9.2	11.5	5.6	8.1
14	---	---	---	7.1	5.8	6.4	11.1	6.6	9.1	11.0	4.9	7.4
15	---	---	---	8.1	6.2	7.0	11.2	6.4	9.0	5.9	4.9	5.2
16	---	---	---	9.6	7.1	7.9	11.2	4.8	8.4	8.0	5.5	6.4
17	7.0	5.8	6.5	12.3	7.3	9.1	6.4	3.4	4.6	9.0	6.1	7.2
18	7.2	5.8	6.4	13.8	7.1	9.7	9.2	5.2	6.4	10.3	6.6	8.3
19	7.6	5.1	6.1	13.3	4.6	7.1	9.8	5.6	7.0	10.2	6.6	8.3
20	6.4	4.7	5.5	6.1	4.6	5.4	9.0	5.8	6.9	9.7	6.8	8.4
21	7.3	5.4	6.4	6.5	5.7	6.0	8.7	4.4	6.0	9.8	6.5	8.2
22	8.4	5.8	7.1	7.3	5.5	6.3	6.2	4.2	5.1	9.6	5.7	7.4
23	9.9	4.4	7.0	7.2	5.8	6.6	6.3	4.2	4.9	9.2	4.9	6.9
24	9.4	4.2	7.1	7.9	6.0	6.9	6.0	4.2	5.0	10.3	7.0	8.4
25	18.5	6.2	11.8	9.0	5.9	7.3	6.1	4.6	5.3	10.3	8.1	8.9
26	11.6	7.1	9.7	9.8	6.6	8.0	6.6	4.8	5.6	10.2	7.3	8.9
27	10.2	5.9	7.8	11.3	6.5	8.7	8.3	5.4	6.6	10.2	8.6	9.4
28	11.1	6.4	8.4	11.7	7.4	9.2	9.8	5.4	7.3	11.2	8.3	9.5
29	11.3	7.3	9.2	9.8	5.4	8.0	9.6	5.0	6.9	11.1	7.6	9.2
30	12.2	7.7	9.6	9.8	5.5	7.6	8.6	4.0	6.4	9.5	7.3	8.2
31	---	---	---	6.2	4.8	5.5	8.6	4.7	6.7	---	---	---
MONTH	---	---	---	13.8	4.3	7.4	14.9	3.4	7.1	11.5	3.6	7.4

03302030 POND CREEK AT PENDLETON ROAD NEAR LOUISVILLE, KY

WATER-QUALITY RECORDS

LOCATION.--Lat 38°03'15", long 85°52'18", Jefferson County, Hydrologic Unit 05140102, at bridge on Pendleton Road, 1.3 mi above Brier Creek and at mile 7.1.

DRAINAGE AREA.--80.3 mi^2.

PERIOD OF RECORD.--February to September 1988.

REMARKS.--Samples were collected biweekly.

COOPERATION.--Field determinations were made in cooperation with Louisville and Jefferson County Metropolitan Sewer District personnel.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)
OCT							
03...	0930	18	837	8.00	18.0	5.9	64
17...	1000	9.6	929	7.76	14.5	8.0	79
31...	1000	7.2	937	7.91	6.5	9.4	76
NOV							
14...	1000	19	705	8.30	8.0	8.7	74
29...	0900	43	570	8.26	4.5	10.2	78
DEC							
12...	1010	13	922	8.35	0.0	14.3	97
JAN							
03...	0905	68	611	8.00	5.5	11.2	90
17...	1016	121	488	8.20	5.0	11.4	90
30...	0920	41	647	7.71	8.0	11.0	92
FEB							
13...	0940	387	470	7.80	5.5	12.4	100
27...	0915	83	325	7.65	5.5	9.2	73
MAR							
13...	0905	69	527	9.07	9.5	8.7	75
27...	0910	62	530	8.10	16.5	9.0	92
APR							
10...	1030	144	430	8.10	8.5	10.5	88
24...	0920	42	620	7.89	15.5	8.2	81
MAY							
22...	0930	32	478	7.80	20.5	6.9	77
JUN							
05...	0950	105	304	7.92	22.0	5.6	64
16...	1000	80	462	7.56	20.5	6.2	68
JUL							
03...	0925	89	391	7.30	23.0	6.2	72
17...	1000	13	569	7.40	29.0	6.4	82
31...	0940	342	718	7.90	26.0	6.8	86
AUG							
14...	0915	6.9	752	8.20	21.5	7.0	80
28...	0950	14	577	7.48	25.5	6.6	80
SEP							
06...	1000	9.3	485	7.06	23.5	6.1	71
25...	1035	9.3	633	7.80	16.5	7.5	79

03303280 OHIO RIVER AT CANNELTON DAM, KY

LOCATION.--Lat 37°53'58", long 86°42'20", Hancock County, Hydrologic Unit 05140201, at Cannelton Dam, 0.7 mi upstream from Indian Creek, 3.3 mi upstream from Lead Creek, and at mile 720.8.

DRAINAGE AREA.--97,000 mi^2, approximately.

PERIOD OF RECORD.--October 1975 to current year.

GAGE.--Gate opening and water-stage recorders. Datum of headwater gage 0.4 mi upstream is 374.0 ft Ohio River datum. Datum of tailwater gage 0.4 mi downstream is 26.0 ft lower.

REMARKS.--Estimated daily discharge: Oct. 11, 12. Records good except for estimated daily discharges and those below 20,000 ft^3/s, which are fair. Daily discharge computed from head, gate openings, and lockages. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream from station.

AVERAGE DISCHARGE.--14 years, 125,700 ft^3/s, 17.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 617,000 ft^3/s, Dec. 15, 1978, maximum headwater gage height, 23.84 ft, Dec. 15, 1978; maximum tailwater gage height, 49.08 ft, Dec. 15, 1978; minimum daily discharge, 3,540 ft^3/s, Sept. 16, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 553,000 ft^3/s, Feb. 21, maximum headwater gage height, 20.80 ft, Feb. 21, maximum tailwater gage height, 46.08 ft, Feb. 21; minimum daily discharge, 8,000 ft^3/s, Oct. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17200	14900	67200	187000	93100	228000	291000	286000	235000	197000	71900	67500
2	10900	33000	61300	173000	93300	178000	311000	294000	175000	203000	53500	66300
3	12100	25600	72600	152000	149000	152000	352000	291000	142000	174000	43700	59000
4	15400	13400	59100	130000	188000	131000	415000	284000	131000	145000	32600	35800
5	10700	28700	47000	116000	255000	133000	463000	277000	127000	133000	41700	23800
6	12400	27200	43800	128000	279000	176000	467000	288000	119000	116000	46500	24000
7	16900	48900	33000	131000	269000	283000	441000	275000	129000	113000	86200	26900
8	11100	73400	41000	155000	220000	283000	408000	274000	129000	114000	92700	24400
9	13400	77900	42000	210000	161000	380000	376000	290000	134000	125000	67000	21200
10	9960	53400	46000	228000	123000	424000	342000	310000	141000	119000	35900	64000
11	8000	60800	44700	225000	91400	442000	306000	332000	146000	103000	34000	42800
12	8000	68400	31700	199000	71900	422000	278000	339000	130000	103000	33500	11300
13	12300	60900	16300	237000	87500	392000	249000	344000	127000	98300	23300	40700
14	18300	53800	18400	283000	195000	241000	216000	355000	128000	78900	21800	28200
15	18500	52000	25100	281000	273000	217000	188000	365000	137000	99200	23200	32300
16	15500	60200	20800	283000	381000	190000	159000	366000	166000	83300	14500	64000
17	22800	65400	15700	328000	457000	171000	140000	358000	208000	60600	22600	99400
18	26800	62000	23600	334000	507000	155000	124000	341000	265000	70500	28700	146000
19	20500	64400	23000	307000	536000	144000	114000	317000	276000	109000	36100	162000
20	10900	116000	23500	261000	551000	141000	130000	317000	328000	106000	44900	130000
21	11200	189000	28700	202000	553000	198000	156000	276000	347000	74300	53400	88000
22	27100	237000	36100	146000	524000	261000	162000	259000	331000	65800	64700	74800
23	60000	267000	60900	109000	483000	273000	139000	232000	276000	96600	77900	60000
24	29600	249000	105000	93100	458000	274000	117000	214000	269000	65000	107000	97700
25	25200	209000	188000	80900	450000	275000	98000	231000	274000	52500	126000	175000
26	31300	156000	353000	69900	437000	277000	82600	243000	339000	55800	148000	237000
27	34600	124000	301000	70200	397000	258000	111000	247000	263000	52700	168000	215000
28	34000	98400	285000	74400	325000	218000	174000	278000	234000	40000	144000	162000
29	24700	87200	272000	77400	---	195000	232000	322000	201000	71000	87900	123000
30	17900	87300	252000	87600	---	203000	289000	322000	187000	76100	63600	96700
31	16000	---	202000	91700	---	291000	---	284000	---	72500	63300	---
TOTAL	603260	2764200	2839500	5450200	8608200	7606000	7330600	9211000	6094000	3073100	1958100	2498800
MEAN	19460	92140	91600	175800	307400	245400	244400	297100	203100	99130	63160	83290
MAX	60000	267000	353000	334000	553000	442000	467000	366000	347000	203000	168000	237000
MIN	8000	13400	15700	69900	71900	131000	82600	214000	119000	40000	14500	11300

CAL YR 1988 TOTAL 27534260 MEAN 75230 MAX 364000 MIN 6210
WTR YR 1989 TOTAL 58036960 MEAN 159000 MAX 553000 MIN 8000

03306000 GREEN RIVER NEAR CAMPBELLSVILLE, KY

LOCATION.--Lat 37°14'25", long 85°20'50", Taylor County, Hydrologic Unit 05110001, on right bank on downstream side of pier of bridge on State Highway 55, 0.6 mi downstream from Green River Dam, 0.8 mi upstream from Pinch Creek, 6.9 mi south of Campbellsville, and at mile 305.1.

DRAINAGE AREA.--682 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to March 1932, October 1963 to current year. Monthly discharge only for October 1930, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Apr. 1, 1932, nonrecording gage at site 1.1 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Water-discharge records fair. Flow regulated by Green River Lake beginning February 1969 (station 03305990).

AVERAGE DISCHARGE.--27 years (Water years 1931, 1964-89), 1,099 ft^3/s, 21.88 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,200 ft^3/s, Jan. 30, 1932, gage height, 21.32 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 6,200 ft^3/s; no flow May 15-17, 1982, October 27-30, 1986, due to closing of outflow gates at Green River Reservoir.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1962, reached a stage of 122.6 ft, from floodmarks, discharge, 60,700 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,730 ft^3/s, Apr. 11, gage height, 113.68 ft, minimum daily discharge, 58 ft^3/s, July 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571	166	3790	401	4320	5060	4720	217	176	368	70	225
2	572	210	3770	400	4290	5030	4700	222	175	369	69	225
3	572	211	3740	400	3950	4090	4420	225	175	306	69	224
4	563	213	3720	400	3030	2580	4020	226	175	250	68	223
5	350	215	3690	399	3040	1880	4010	228	174	213	68	149
6	216	214	3670	1180	3360	597	4430	226	174	250	70	79
7	211	214	3640	2420	4000	239	5180	318	174	331	68	80
8	211	499	3220	3270	4380	237	5490	810	174	380	130	80
9	211	899	2570	4260	4350	610	5460	1160	177	380	180	80
10	212	903	1860	4810	4320	1420	6060	1160	177	381	179	80
11	212	896	1520	3380	4280	2340	6680	1210	176	315	179	80
12	212	895	1360	1690	4250	3170	6620	1250	412	252	179	80
13	212	892	1190	2430	3200	4010	6570	1250	967	238	117	80
14	213	892	1190	2870	924	4640	6500	1250	1290	213	72	80
15	213	891	1180	1720	493	5030	6450	803	1410	176	72	80
16	213	887	1180	2170	457	5440	6390	433	1340	176	72	192
17	215	1150	1180	3210	438	5420	6330	338	2210	120	72	366
18	216	1320	1170	4410	435	5390	6270	259	2860	58	72	705
19	215	802	1170	4690	433	5370	6210	258	3610	62	72	933
20	216	287	903	4660	466	5350	5390	259	4380	74	71	933
21	217	522	370	4630	525	5360	3630	258	4420	73	70	931
22	217	2540	363	4610	464	5360	1800	257	4400	72	70	968
23	218	3990	374	4570	455	5790	1210	257	3670	72	69	944
24	478	3950	422	4530	456	6440	1060	284	2180	72	70	1590
25	650	3920	393	4510	1450	6570	566	307	1280	72	70	2510
26	648	3890	393	4480	2740	6530	390	306	826	72	69	2490
27	645	3870	393	4450	3920	6480	392	306	826	72	69	2470
28	645	3850	405	4410	4910	6430	326	304	823	71	155	2450
29	639	3830	400	4390	---	5560	216	304	823	71	208	2100
30	637	3810	400	4360	---	4000	216	306	588	70	226	1660
31	501	---	399	4340	---	4430	---	261	---	70	225	---
TOTAL	11321	46828	50025	98450	69336	130853	121706	15252	40242	5699	3250	23087
MEAN	365	1561	1614	3176	2476	4221	4057	492	1341	184	105	770
MAX	650	3990	3790	4810	4910	6570	6680	1250	4420	381	226	2510
MIN	211	166	363	399	433	237	216	217	174	58	68	79

CAL YR 1988 TOTAL 253377 MEAN 692 MAX 4230 MIN 53
WTR YR 1989 TOTAL 616049 MEAN 1688 MAX 6680 MIN 58

03306000 GREEN RIVER NEAR CAMPBELLSVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 31, 1963.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.0°C, Aug. 3-5, 1964; minimum, 0.0°C, on many days during 1963-66.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.0°C, July 16; minimum, 5.0°C, several days in February and March.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	20.0	15.5	15.5	12.0	11.5	8.0	8.0	6.5	6.5	5.0	5.0
2	20.0	20.0	15.5	15.5	11.5	11.5	8.0	8.0	7.0	6.5	5.0	5.0
3	20.0	20.0	15.5	15.5	11.5	11.5	8.0	8.0	7.0	7.0	5.0	5.0
4	20.0	19.5	15.0	15.0	11.5	11.5	8.0	7.0	7.0	7.0	5.0	5.0
5	19.5	19.0	15.0	15.0	11.5	11.0	7.0	7.0	7.0	7.0	5.5	5.0
6	19.0	19.0	15.0	15.0	11.0	10.5	7.0	7.0	7.0	7.0	5.5	5.5
7	19.0	19.0	15.0	15.0	11.0	10.5	7.0	7.0	7.0	7.0	5.5	5.5
8	18.5	18.5	15.0	15.0	10.5	10.5	7.0	7.0	7.0	7.0	6.0	6.0
9	18.5	18.5	14.5	14.5	10.5	10.0	7.0	7.0	7.0	6.5	6.0	6.0
10	18.5	18.0	14.5	14.5	10.0	9.5	7.0	7.0	6.0	6.0	6.0	6.0
11	18.5	18.0	14.5	14.5	9.5	9.5	7.0	7.0	6.0	6.0	6.0	6.0
12	18.5	18.5	14.5	14.5	9.5	9.0	7.0	7.0	6.0	6.0	6.0	6.0
13	18.0	18.0	14.0	14.0	9.0	9.0	7.0	7.0	6.0	6.0	6.0	6.0
14	18.0	18.0	14.0	14.0	9.0	8.5	7.0	7.0	6.0	6.0	6.0	6.0
15	18.5	18.0	14.0	14.0	8.5	8.5	7.0	7.0	6.0	6.0	6.0	6.0
16	18.0	18.0	14.0	13.5	8.5	8.5	7.0	7.0	6.0	6.0	6.0	6.0
17	18.0	17.0	13.5	13.5	8.5	8.5	7.0	7.0	6.0	6.0	6.0	6.0
18	18.0	18.0	14.0	13.5	8.5	8.0	7.0	7.0	6.0	6.0	6.5	6.0
19	18.0	18.0	13.5	13.0	8.0	7.5	8.0	7.0	6.0	6.0	6.5	6.5
20	18.0	18.0	13.5	13.0	7.0	7.0	8.0	8.0	6.0	5.5	7.0	7.0
21	18.0	17.0	13.5	13.0	7.0	7.0	8.0	8.0	6.0	5.5	7.0	7.0
22	16.5	16.5	13.5	13.0	7.0	7.0	8.0	8.0	5.5	5.5	7.0	7.0
23	16.5	16.5	13.0	13.0	7.0	7.0	8.0	8.0	5.5	5.5	7.0	7.0
24	17.0	16.5	13.0	13.0	8.0	7.0	8.0	8.0	5.5	5.5	7.0	7.0
25	17.0	17.0	13.0	13.0	7.0	7.0	8.0	8.0	5.5	5.0	7.0	7.0
26	16.5	16.5	13.0	12.5	7.0	7.0	7.0	6.5	5.0	5.0	8.0	7.0
27	16.5	16.5	13.0	12.5	7.0	7.0	6.5	6.5	5.0	5.0	8.0	8.0
28	16.5	16.5	12.5	12.5	7.0	7.0	7.0	6.5	5.0	5.0	8.0	8.0
29	16.5	16.5	12.0	12.0	7.0	7.0	7.0	6.5	---	---	8.0	8.0
30	16.5	16.5	12.0	12.0	7.0	7.0	6.5	6.5	---	---	8.0	8.0
31	16.0	15.5	---	---	8.0	8.0	6.5	6.5	---	---	9.0	8.0
MONTH	20.0	15.5	15.5	12.0	12.0	7.0	8.0	6.5	7.0	5.0	9.0	5.0

03306000 GREEN RIVER NEAR CAMPBELLSVILLE, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	9.0	10.5	10.5	18.5	18.0	14.5	14.5	23.0	23.0	23.5	23.5
2	9.0	8.0	13.0	10.5	18.0	17.0	14.5	14.5	23.0	22.0	23.5	23.5
3	8.5	8.0	14.0	13.0	18.0	17.0	22.0	14.0	23.0	23.0	23.5	23.5
4	9.0	8.5	14.0	13.5	18.5	18.0	21.5	21.5	23.5	22.0	23.5	23.5
5	9.0	9.0	14.0	13.5	18.5	18.0	21.5	21.5	23.5	23.0	24.0	23.5
6	9.0	9.0	14.0	13.0	18.5	18.0	21.5	21.5	23.0	23.0	24.5	24.0
7	9.5	9.0	13.0	10.5	18.5	18.0	21.0	13.5	23.0	22.0	24.0	24.0
8	9.5	9.0	10.5	10.5	18.5	18.5	13.5	13.5	22.0	22.0	24.5	24.0
9	9.5	9.0	11.0	10.5	19.0	18.0	13.5	13.5	23.0	22.0	24.5	24.5
10	9.5	9.5	11.0	11.0	18.5	18.0	13.5	13.5	23.0	23.0	24.5	24.5
11	9.5	9.5	11.0	11.0	19.0	18.5	21.0	13.5	23.0	23.0	24.5	24.5
12	10.0	10.0	11.0	11.0	19.0	14.0	21.5	21.0	23.0	22.0	24.0	24.0
13	10.0	10.0	11.0	11.0	14.5	14.0	21.5	21.5	23.5	22.0	24.5	24.5
14	10.5	10.0	11.5	11.5	13.5	13.5	21.5	21.0	23.5	23.0	24.5	24.0
15	10.5	10.5	11.5	11.0	14.0	13.5	22.0	22.0	23.5	23.0	24.0	24.0
16	10.5	10.5	11.0	10.5	13.5	13.5	23.0	22.0	23.5	23.0	24.0	23.0
17	10.5	10.5	14.5	10.5	15.0	13.5	23.5	23.0	23.5	23.0	23.0	14.5
18	14.5	10.5	15.0	14.5	15.0	15.0	25.0	23.5	23.5	23.0	15.0	14.5
19	14.5	14.5	15.5	15.0	16.0	15.5	23.0	22.0	23.5	23.0	15.0	15.0
20	14.5	14.5	16.0	15.0	16.5	16.0	23.0	22.0	23.0	23.0	15.0	15.0
21	14.5	11.0	16.0	16.0	16.5	16.5	23.5	23.0	23.0	23.0	15.0	15.0
22	11.0	10.5	16.5	16.5	16.5	16.5	23.5	23.0	23.5	23.0	16.0	15.0
23	11.0	11.0	15.5	14.5	16.5	16.5	23.5	23.0	23.5	23.5	15.5	15.5
24	11.0	11.0	15.5	15.5	16.5	15.5	22.0	22.0	23.5	23.5	18.0	15.5
25	11.0	10.5	15.5	15.5	15.5	14.5	23.0	22.0	24.0	23.5	18.0	18.0
26	10.5	10.5	16.0	15.5	14.5	14.5	22.0	22.0	23.5	23.5	18.0	18.0
27	10.5	10.5	17.0	16.0	14.5	14.5	22.0	22.0	23.5	23.5	18.0	18.0
28	10.5	10.5	16.5	16.0	14.5	14.5	22.0	22.0	23.5	23.5	18.0	18.0
29	10.5	10.0	16.5	16.0	14.5	14.5	23.0	22.0	24.5	23.5	18.0	18.0
30	10.5	10.5	16.5	16.5	15.0	14.5	22.0	22.0	23.5	23.5	18.0	18.0
31	---	---	17.0	16.5	---	---	23.0	22.0	23.5	23.5	---	---
MONTH	14.5	8.0	17.0	10.5	19.0	13.5	25.0	13.5	24.5	22.0	24.5	14.5
YEAR	25.0	5.0										

03307000 RUSSELL CREEK NEAR COLUMBIA, KY

LOCATION.--Lat 37°07'09", long 85°23'38", Adair County, Hydrologic Unit 05110001, on left bank at downstream side of bridge on State Highway 61, 0.3 mi upstream from Butlers Fork, 5.0 mi west of Columbia, and at mile 26.9. Records include flow of Butlers Fork.

DRAINAGE AREA.--188 mi^2 (includes that of Butlers Fork), of which about 15 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1939 to current year. Prior to December 1939, monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1275: 1940. WSP 1335: 1953. WSP 1555: Drainage area. WRD KY-75-1: 1949(M), 1952(M), 1955(M), 1962(M), 1967(M), 1974(M).

GAGE.--Water-stage recorder. Datum of gage is 610.96 ft above National Geodetic Vertical Datum of 1929. Prior to June 25, 1953, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 26-28, Feb. 9-12, and Mar. 18-19. Records good except for estimated daily discharges, which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--50 years, 291 ft^3/s, 21.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,600 ft^3/s, Sept. 1, 1982, gage height, 26.12 ft; minimum daily, 0.4 ft^3/s, Sept. 25, 1952, Oct. 22-24, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1937 reached a stage of about 23 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1700	8,190	16.44	Feb. 21	1100	*14,600	*19.72
Dec. 24	2300	12,700	18.93	Mar. 5	2300	10,400	17.83
Jan. 12	2200	4,540	12.43	June 15	1800	5,120	13.23
Feb. 15	1400	10,800	18.07				

Minimum daily discharge, 19 ft^3/s, Sept. 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	41	203	319	238	246	499	72	35	60	134	27
2	47	36	162	257	199	214	353	77	33	74	122	35
3	43	34	134	218	1370	199	645	70	32	112	63	47
4	39	36	120	184	1170	183	2720	67	37	328	46	31
5	34	146	104	156	614	4920	1440	95	41	435	39	26
6	30	290	97	712	436	5870	735	132	61	187	42	23
7	27	205	92	571	326	1160	542	103	66	159	69	22
8	25	138	87	2300	257	666	437	81	53	129	57	21
9	25	101	80	866	197	486	356	78	114	98	41	20
10	24	425	76	524	160	386	281	94	122	79	34	19
11	23	518	72	506	141	328	237	82	64	73	31	19
12	23	237	65	3310	137	287	207	69	430	81	29	21
13	21	163	63	2060	191	250	184	63	1330	79	27	26
14	20	127	64	1080	6800	232	165	59	869	66	26	38
15	20	101	61	1520	8880	208	222	57	3300	56	25	499
16	20	93	57	797	3250	173	226	63	1620	48	24	1830
17	21	208	54	541	1350	154	177	54	709	43	26	588
18	21	160	52	413	861	146	153	51	431	40	113	234
19	22	652	51	327	733	139	136	48	318	40	83	129
20	21	6430	52	266	1450	196	122	60	312	91	55	91
21	21	1240	793	211	10800	2480	112	96	243	67	37	71
22	24	563	810	178	1940	921	105	61	217	70	31	549
23	26	381	1390	160	883	546	100	325	162	50	31	1800
24	30	281	6260	143	581	411	97	170	157	40	35	726
25	60	239	3710	130	461	331	95	95	125	45	167	371
26	41	177	733	123	406	277	89	71	98	39	68	255
27	33	665	480	117	340	237	83	68	84	34	74	171
28	37	492	1080	119	297	209	78	59	76	35	47	118
29	83	334	816	125	---	276	76	47	75	37	36	106
30	65	259	516	279	---	356	71	42	77	40	31	223
31	48	---	382	313	---	598	---	38	---	37	28	---
TOTAL	1025	14772	18716	18825	44468	23085	10743	2547	11291	2772	1671	8136
MEAN	33.1	492	604	607	1588	745	358	82.2	376	89.4	53.9	271
MAX	83	6430	6260	3310	10800	5870	2720	325	3300	435	167	1830
MIN	20	34	51	117	137	139	71	38	32	34	24	19
CFSM	.18	2.62	3.21	3.23	8.45	3.96	1.90	.44	2.00	.48	.29	1.44
IN.	.20	2.92	3.70	3.72	8.80	4.57	2.13	.50	2.23	.55	.33	1.61

CAL YR 1988 TOTAL 78292.5 MEAN 214 MAX 6430 MIN 1.0 CFSM 1.14 IN. 15.49
WTR YR 1989 TOTAL 158051 MEAN 433 MAX 10800 MIN 19 CFSM 2.30 IN. 31.27

03308500 GREEN RIVER AT MUNFORDVILLE, KY

LOCATION.--Lat 37°16'05", long 85°53'10", Hart County, Hydrologic Unit 05110001, on right bank at downstream side of pier of bridge on U.S. Highway 31W at Munfordville, and at mile 225.9.

DRAINAGE AREA.--1,673 mi^2, of which about 180 mi^2 does not contribute directly to surface runoff.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1915 to December 1922, October 1927 to September 1931, December 1936 to February 1937 (in WSP 838), October 1937 to current year. Monthly discharge only October 1937 to March 1938, published in WSP 1305. Gage-height records collected at same site since 1924 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1555: 1916(M), drainage area. WSP 1909: 1937.

GAGE.--Water-stage recorder. Datum of gage is 451.70 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 18, 1940, nonrecording gages at site 0.2 mi downstream at same datum. Oct. 18 to Nov. 29, 1940, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Green River Lake beginning February 1969 (station 03305990).

AVERAGE DISCHARGE.--63 years (Water years 1916-21, 1928-31, 1938-89), 2,704 ft^3/s, 21.95 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,800 ft^3/s, Mar. 1, 1962; maximum gage height, 57.72 ft, Mar. 1, 1962; minimum discharge, 39 ft^3/s, Sept. 2, 1921, gage height, 2.2 ft, site then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1913 reached a stage of 54.0 ft at former site, discharge, 67,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 44,700 ft^3/s, Feb. 16, gage height, 43.00 ft; minimum, 229 ft^3/s, Sept. 13, 14, gage height, 2.47 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	695	846	4830	2840	5530	6580	7470	872	672	1280	492	514
2	669	664	4550	2440	5330	6510	7020	849	623	1020	609	541
3	653	407	4350	2110	10400	6370	6880	834	501	1080	656	520
4	624	400	4230	1890	19400	5680	11100	824	488	1980	536	506
5	605	480	4110	1690	13700	7920	14900	854	518	1870	415	513
6	585	660	4020	2370	7680	24200	10700	1020	517	1700	594	496
7	475	969	3950	4720	6550	28400	8140	1150	534	1220	847	458
8	350	877	3890	7160	6480	14700	7800	1020	524	1070	709	311
9	332	683	3540	9560	6410	5260	7640	1170	556	1050	570	271
10	324	1070	2930	7660	6110	4040	7180	1820	618	1000	498	263
11	316	2200	2300	7090	5930	4060	7190	1810	673	971	537	260
12	309	2220	1850	11300	5810	4550	7540	1710	665	1170	508	260
13	299	1600	1740	16200	6570	5020	7420	1660	5140	1410	491	250
14	296	1380	1510	12300	20600	5600	7280	1620	7550	1230	477	249
15	294	1280	1480	16500	35400	6080	7230	1590	9920	984	439	316
16	299	1220	1470	12500	44000	6110	7320	1420	16200	868	321	1200
17	324	1190	1440	7260	39600	6370	7170	961	8590	741	309	2610
18	328	1240	1420	6400	26200	6320	6980	893	4960	684	482	1700
19	319	3670	1410	6660	9560	6260	6840	785	5450	686	457	1060
20	315	12600	1400	6500	5940	6210	6700	750	5730	662	472	1190
21	322	19100	1580	6100	15700	9130	6150	766	5830	603	495	1160
22	333	9250	4570	5810	27400	12600	4610	802	5660	786	458	1490
23	342	4320	6350	5600	22300	9400	2830	1040	5360	653	483	3220
24	345	5340	11800	5440	7760	8070	2010	1500	4760	547	532	3900
25	342	4950	21200	5310	4760	8010	1890	1130	3280	496	571	2580
26	571	4700	16500	5220	4590	7870	1490	938	2240	451	650	2950
27	805	5930	5280	5280	5450	7610	1170	846	1560	397	647	2780
28	827	6780	4580	5250	5990	7420	1110	791	1450	364	581	2650
29	837	5840	7780	5120	---	7290	1070	765	1400	332	487	2570
30	810	5190	5100	5100	---	7180	967	721	1340	400	430	2430
31	843	---	3540	5610	---	6500	---	689	---	432	507	---
TOTAL	14788	107056	144700	204990	381150	257320	183797	33600	103309	28137	16260	39218
MEAN	477	3569	4668	6613	13610	8301	6127	1084	3444	908	525	1307
MAX	843	19100	21200	16500	44000	28400	14900	1820	16200	1980	847	3900
MIN	294	400	1400	1690	4590	4040	967	689	488	332	309	249

CAL YR 1988 TOTAL 664440 MEAN 1815 MAX 21200 MIN 157
WTR YR 1989 TOTAL 1514325 MEAN 4149 MAX 44000 MIN 249

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1949 to September 1973, October 1978 to September 1980, October 1983 to current year.
WATER TEMPERATURES: October 1950 to September 1980, October 1982 to current year.
SUSPENDED-SEDIMENT DISCHARGE: April 1951 to current year.

REMARKS.--Sediment samples collected daily by a local observer. Water temperature recorded when sample is collected and conductance is determined when samples are analyzed.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (Water years 1949-73, 1984-89): Maximum daily, 9,420 microsiemens, Oct. 10, 1959; minimum daily, 59 microsiemens, Mar. 25, 1952.
WATER TEMPERATURE (Water years 1950-77, 1980, 1983-89): Maximum daily, 29.0°C, July 13-17, 1980; minimum daily, 0.0°C, on many days during winter periods.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,160 mg/L, June 14, 1952; minimum daily mean, 0 mg/L, on several days during winter periods.
SEDIMENT LOADS: Maximum daily, 157,000 tons, Mar. 1, 1962; minimum daily, 0 ton, on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 698 microsiemens, Aug. 14; minimum daily, 125 microsiemens, Mar. 29.
WATER TEMPERATURE: Maximum daily, 28.0°C, July 11, Aug. 5; minimum daily, 3.0°C, Dec. 18, Feb. 10.
SEDIMENT CONCENTRATION: Maximum daily mean, 667 mg/L, Dec. 24, June 15; minimum daily mean, 7 mg/L, Oct. 12.
SEDIMENT LOADS: Maximum daily, 34,500 tons, Feb. 14; minimum daily, 5.9 tons, Oct. 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)
OCT 1988											
25...	1200	320	293	7.90	10.0	3.4	9.9	89	27	47	110
DEC											
07...	1145	4100	198	7.70	8.5	17	11.1	96	270	230	86
FEB 1989											
08...	1245	6440	193	7.90	4.5	19	12.3	96	760	28	87
16...	1635	46900	141	--	12.0	90	--	--	--	--	67
APR											
05...	1230	16600	170	L7.70	13.0	63	9.5	91	47000	50000	84
JUN											
14...	1150	9080	205	7.28	23.5	150	11.3	136	8200	>20000	95
AUG											
02...	1000	594	362	7.70	24.5	11	6.9	84	300	170	150

DATE	HARDNESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKALINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1988											
25...	35	33	7.0	15	2.3	93	76	77	23	21	0.10
DEC											
07...	21	25	5.8	3.6	2.0	80	66	66	6.0	20	0.10
FEB 1989											
08...	15	27	4.8	2.9	1.5	87	71	72	5.2	15	0.10
16...	11	22	2.9	1.6	1.9	66	54	56	3.0	15	0.10
APR											
05..	16	27	4.0	2.2	1.8	--	69	69	3.6	12	0.10
JUN											
14...	14	31	4.3	3.2	3.0	99	81	84	5.6	12	0.10
AUG											
02...	20	49	7.4	10	2.0	145	119	118	2.6	17	0.20

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
OCT 1988										
25...	4.8	165	155	<0.010	0.410	0.020	0.010	0.20	0.050	0.050
DEC										
07...	3.8	110	108	0.010	0.500	0.020	0.020	0.30	0.040	0.010
FEB 1989										
08...	6.1	111	110	<0.010	1.00	0.020	<0.010	0.70	0.040	0.020
16...	4.8	86	89	0.040	0.870	0.050	0.070	0.50	0.050	0.090
APR										
05...	6.0	109	101	<0.010	0.690	0.070	0.020	0.70	0.140	<0.010
JUN										
14...	5.6	131	119	0.020	1.20	0.060	0.070	0.80	0.110	0.060
AUG										
02...	5.9	188	178	<0.010	0.890	<0.010	<0.010	0.50	0.050	0.020

DATE	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988										
25...	0.020	<10	<1	25	<0.5	<1	<1	<3	2	130
DEC										
07...	<0.010	<10	<1	21	<0.5	1	<1	<3	1	29
FEB 1989										
08...	0.010	--	--	--	--	--	--	--	--	--
16...	0.080	90	<1	16	<0.5	<1	2	<3	6	120
APR										
05...	0.030	150	<1	18	<0.5	<1	<1	<3	2	220
JUN										
14...	0.050	80	<1	24	<0.5	<1	<1	<3	3	100
AUG										
02...	0.020	--	--	--	--	--	--	--	--	--

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1988										
25...	<5	8	16	<10	<1	<1	<1.0	140	<6	3
DEC										
07...	<5	<4	5	<10	6	<1	<1.0	81	<6	<3
FEB 1989										
08...	--	--	--	--	--	--	--	--	--	--
16...	<5	<4	4	<10	1	<1	<1.0	55	<6	<3
APR										
05...	<5	<4	12	<10	6	<1	<1.0	78	<6	20
JUN										
14...	1	5	8	<10	<1	<1	<1.0	110	<6	8
AUG										
02...	--	--	--	--	--	--	--	--	--	--

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
(National stream-quality accounting network station)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1988							
06...	0950	559	270	14.0	22	33	78
25...	1200	320	293	10.0	6	5.2	66
NOV							
09...	1015	691	344	10.0	9	17	83
DEC							
07...	1145	4100	198	8.5	30	327	79
FEB 1989							
08...	1245	6440	193	4.5	36	626	75
16...	1635	46900	141	12.0	129	16300	92
17...	0800	41300	150	8.0	85	9480	93
APR							
05...	1230	16600	170	13.0	127	5690	83
JUN							
14...	1150	9080	205	23.5	320	7850	88
AUG							
02...	1000	594	362	24.5	30	48	75
SEP							
13...	1015	248	345	22.5	19	13	88

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	260	211	285	185	173	191	259	265	222	338	299
2	---	257	205	288	181	165	165	282	269	226	343	323
3	---	261	202	291	190	165	159	288	274	251	328	287
4	---	277	204	296	183	165	179	287	282	261	353	279
5	---	305	200	295	215	206	178	285	288	254	333	272
6	230	344	196	293	221	155	183	283	299	277	326	302
7	---	295	191	289	215	144	184	292	303	283	314	314
8	---	512	190	232	198	205	171	327	313	268	317	320
9	---	382	190	210	184	243	159	303	314	270	315	328
10	---	335	195	208	181	255	155	235	320	258	360	337
11	---	258	206	205	179	248	146	208	321	253	375	348
12	---	331	218	205	180	215	136	205	333	253	355	361
13	---	270	215	202	177	192	135	196	411	263	321	380
14	275	253	230	207	168	173	133	192	230	268	698	377
15	275	249	229	192	140	161	134	189	224	277	296	374
16	282	247	228	221	145	158	137	187	201	277	298	355
17	280	243	230	238	154	145	139	199	209	279	301	286
18	278	240	224	227	211	143	135	233	241	278	297	227
19	283	259	221	207	244	146	132	250	204	282	301	256
20	286	257	212	198	250	144	133	260	215	295	344	255
21	278	179	208	193	190	149	133	274	182	306	311	220
22	276	202	316	184	142	168	142	276	175	303	334	216
23	294	281	263	181	176	168	168	292	169	327	326	219
24	290	216	221	183	239	166	196	333	166	299	336	215
25	294	213	161	178	251	157	198	273	180	319	315	261
26	295	---	173	177	253	151	201	279	204	346	357	200
27	363	210	262	175	213	144	230	273	211	339	340	194
28	240	240	275	186	196	136	255	268	232	341	350	189
29	240	220	244	179	---	125	258	263	227	345	335	184
30	241	213	250	175	---	151	258	264	226	343	416	182
31	267	---	273	185	---	175	---	266	---	340	379	---
MAX	---	---	316	296	253	255	258	333	411	346	698	380
MIN	---	---	161	175	140	125	132	187	166	222	296	182

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
(National stream-quality accounting network station)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	10.0	8.0	7.0	8.0	5.0	10.0	19.0	23.0	21.0	24.0	25.0
2	---	10.0	7.0	8.0	8.0	6.0	10.0	18.0	24.0	20.0	24.0	24.0
3	---	10.0	7.0	7.0	9.0	6.0	11.0	16.0	23.0	20.0	25.0	24.0
4	---	12.0	8.0	7.0	7.3	8.0	12.0	16.0	23.0	21.0	25.0	23.0
5	---	12.0	7.0	5.0	7.0	10.0	13.0	16.0	23.0	21.0	26.0	23.0
6	14.0	10.0	7.0	7.0	5.0	9.0	11.0	15.0	22.0	22.0	25.0	23.0
7	---	10.0	6.5	7.0	5.0	7.0	10.0	13.0	21.0	22.0	23.0	23.0
8	---	11.0	9.0	8.0	4.5	7.0	10.0	13.0	21.0	23.0	21.0	23.0
9	---	10.0	8.0	9.0	4.0	7.0	10.0	14.0	21.0	24.0	20.0	23.0
10	---	12.0	7.0	7.7	3.0	8.0	9.0	15.0	21.0	25.0	20.0	24.0
11	---	12.0	6.0	6.0	5.0	8.0	9.0	14.0	21.0	26.0	21.0	23.0
12	---	11.0	5.0	9.0	5.0	9.0	9.0	14.0	22.0	24.0	21.0	22.0
13	---	11.0	5.0	9.3	6.0	9.0	9.0	13.0	20.0	22.0	21.0	22.5
14	10.0	10.0	7.5	9.0	8.0	9.0	10.0	14.0	20.0	22.0	22.0	23.0
15	11.0	11.0	6.0	8.0	9.0	10.0	11.0	15.0	19.0	22.0	22.0	21.0
16	11.0	14.0	5.0	8.5	12.0	8.0	10.0	15.0	18.0	23.0	22.0	21.0
17	12.0	11.0	5.0	7.0	8.0	8.0	12.0	15.0	16.0	22.0	22.0	21.0
18	15.0	10.0	3.0	7.0	8.0	9.0	12.0	17.0	17.0	22.0	22.0	19.0
19	12.0	10.0	5.0	6.0	7.0	7.0	12.0	19.0	18.0	23.0	22.0	19.0
20	12.0	12.0	7.0	7.0	8.0	9.0	12.0	19.0	19.0	22.0	22.0	19.0
21	13.0	12.0	8.0	5.0	9.0	8.0	12.0	19.0	19.0	22.0	23.0	19.0
22	12.0	11.0	9.0	5.0	8.0	8.0	13.0	20.0	19.0	23.0	23.0	20.0
23	11.0	9.0	10.0	5.0	6.3	8.0	14.0	20.0	20.0	24.0	24.0	19.0
24	10.0	9.0	12.0	6.0	5.0	9.0	15.0	19.0	20.0	24.0	24.0	17.0
25	10.0	10.0	11.7	7.0	5.0	10.0	16.0	20.0	20.0	24.0	24.0	16.0
26	9.0	12.0	9.7	8.0	7.0	10.0	16.0	21.0	21.0	25.0	25.0	16.0
27	8.0	13.0	9.0	7.0	7.0	10.0	18.0	22.0	21.0	25.0	24.0	16.0
28	10.0	11.0	9.0	6.0	6.0	11.0	19.0	21.0	22.0	25.0	25.0	17.0
29	10.0	9.0	6.0	7.0	---	12.0	20.0	21.0	21.0	25.0	25.0	18.0
30	10.0	9.0	7.0	8.0	---	12.0	20.0	22.0	20.0	25.0	25.0	18.0
31	10.0	---	7.0	7.0	---	11.0	---	23.0	---	24.0	25.0	---
MAX	---	14.0	12.0	9.3	12.0	12.0	20.0	23.0	24.0	26.0	26.0	25.0
MIN	---	9.0	3.0	5.0	3.0	5.0	9.0	13.0	16.0	20.0	20.0	16.0

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
(National stream-quality accounting network station)

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	695	34	64	846	15	33	4830	81	1050
2	669	30	55	664	13	24	4550	82	1010
3	653	27	48	407	13	14	4350	71	834
4	624	24	40	400	13	14	4230	67	764
5	605	21	35	480	14	18	4110	66	731
6	585	17	28	660	18	33	4020	63	682
7	475	16	20	969	29	77	3950	55	584
8	350	13	12	877	20	48	3890	58	605
9	332	10	9.1	683	9	18	3540	65	620
10	324	10	8.5	1070	31	98	2930	53	423
11	316	9	7.4	2200	127	818	2300	39	246
12	309	7	5.9	2220	104	633	1850	32	159
13	299	8	6.2	1600	56	245	1740	28	130
14	296	12	10	1380	39	144	1510	20	80
15	294	12	9.9	1280	32	110	1480	17	68
16	299	14	11	1220	31	103	1470	15	58
17	324	14	13	1190	33	106	1440	13	53
18	328	15	14	1240	56	199	1420	14	56
19	319	13	11	3670	365	4610	1410	15	56
20	315	11	9.2	12600	562	19300	1400	14	55
21	322	13	11	19100	262	13700	1580	20	87
22	333	12	11	9250	103	2540	4570	186	2420
23	342	12	11	4320	145	1720	6350	370	6930
24	345	10	9.0	5340	111	1610	11800	667	23000
25	342	8	7.5	4950	98	1300	21200	584	32800
26	571	18	30	4700	91	1160	16500	210	10100
27	805	24	53	5930	124	2020	5280	95	1350
28	827	23	52	6780	101	1850	4580	239	3480
29	837	22	50	5840	69	1090	7780	213	4600
30	810	18	38	5190	58	955	5100	63	892
31	843	16	37	---	---	---	3540	35	337
TOTAL	14788	---	726.7	107056	---	54590	144700	---	94260
		JANUARY			FEBRUARY			MARCH	
1	2840	31	234	5530	71	1060	6580	114	2020
2	2440	25	166	5330	82	1190	6510	111	1950
3	2110	21	118	10400	314	10800	6370	101	1730
4	1890	17	85	19400	266	13600	5680	100	1510
5	1690	14	65	13700	59	2200	7920	570	13700
6	2370	59	454	7680	34	707	24200	362	23000
7	4720	127	1630	6550	38	675	28400	138	10500
8	7160	337	7290	6480	46	803	14700	52	2080
9	9560	229	5960	6410	50	872	5260	73	1040
10	7660	109	2250	6110	52	855	4040	32	348
11	7090	104	2000	5930	51	823	4060	38	419
12	11300	277	9070	5810	50	778	4550	45	551
13	16200	172	7520	6570	121	2450	5020	48	647
14	12300	153	5150	20600	600	34500	5600	72	1100
15	16500	264	11600	35400	362	33600	6080	83	1370
16	12500	78	2740	44000	160	19000	6110	77	1270
17	7260	57	1120	39600	71	7770	6370	79	1360
18	6400	51	889	26200	43	2840	6320	72	1230
19	6660	50	897	9560	83	2080	6260	69	1170
20	6500	63	1100	5940	90	1450	6210	53	892
21	6100	72	1180	15700	542	26700	9130	186	5160
22	5810	67	1040	27400	222	16200	12600	122	4200
23	5600	70	1050	22300	79	4970	9400	77	1960
24	5440	61	899	7760	67	1360	8070	76	1660
25	5310	68	971	4760	47	601	8010	77	1670
26	5220	68	957	4590	70	891	7870	66	1410
27	5280	69	991	5450	77	1130	7610	67	1380
28	5250	70	999	5990	93	1510	7420	76	1530
29	5120	74	1020	---	---	---	7290	66	1300
30	5100	64	878	---	---	---	7180	53	1040
31	5610	41	622	---	---	---	6500	94	1680
TOTAL	204990	---	70945	381150	---	191415	257320	---	90877

03308500 GREEN RIVER AT MUNFORDVILLE, KY--Continued
(National stream-quality accounting network station)

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	7470	72	1460	872	9	22	672	10	19
2	7020	50	955	849	9	21	623	9	16
3	6880	48	899	834	9	21	501	8	10
4	11100	164	5340	824	8	18	488	12	16
5	14900	114	4690	854	8	17	518	14	19
6	10700	14	403	1020	13	36	517	14	20
7	8140	43	941	1150	13	41	534	17	24
8	7800	54	1140	1020	8	23	524	18	25
9	7640	53	1100	1170	21	73	556	20	31
10	7180	45	867	1820	34	167	618	25	42
11	7190	54	1060	1810	30	145	673	23	41
12	7540	61	1240	1710	25	118	665	32	62
13	7420	53	1060	1660	23	104	5140	602	10300
14	7280	52	1020	1620	23	102	7550	351	7510
15	7230	56	1100	1590	26	110	9920	667	21000
16	7320	58	1150	1420	20	76	16200	208	9270
17	7170	52	1000	961	13	34	8590	135	3070
18	6980	56	1060	893	13	32	4960	92	1240
19	6840	53	972	785	10	21	5450	160	2390
20	6700	46	841	750	9	18	5730	145	2240
21	6150	43	709	766	11	23	5830	100	1570
22	4610	39	490	802	15	32	5660	87	1330
23	2830	33	250	1040	30	113	5360	85	1220
24	2010	29	156	1500	55	221	4760	79	1020
25	1890	28	142	1130	43	132	3280	63	559
26	1490	28	111	938	26	65	2240	53	322
27	1170	26	82	846	18	41	1560	39	163
28	1110	20	60	791	15	32	1450	31	119
29	1070	15	45	765	15	31	1400	30	112
30	967	13	33	721	15	29	1340	26	95
31	---	---	---	689	13	24	---	---	---
TOTAL	183797	---	30376	33600	---	1942	103309	---	63855
		JULY			AUGUST			SEPTEMBER	
1	1280	24	84	492	23	31	514	29	41
2	1020	17	47	609	31	51	541	31	45
3	1080	29	93	656	32	56	520	30	42
4	1980	114	616	536	24	35	506	29	40
5	1870	119	599	415	19	22	513	24	34
6	1700	70	325	594	38	61	496	26	34
7	1220	39	129	847	61	140	458	25	31
8	1070	37	108	709	44	84	311	21	18
9	1050	26	73	570	33	51	271	19	14
10	1000	22	60	498	25	33	263	19	13
11	971	22	58	537	24	35	260	18	13
12	1170	46	150	508	24	33	260	18	13
13	1410	76	290	491	24	31	250	18	12
14	1230	54	181	477	25	32	249	19	12
15	984	35	94	439	23	27	316	22	21
16	868	22	52	321	21	18	1200	89	332
17	741	19	37	309	23	19	2610	304	2170
18	684	19	35	482	26	35	1700	178	854
19	686	23	43	457	30	36	1060	69	199
20	662	22	38	472	31	39	1190	67	216
21	603	22	35	495	34	45	1160	51	159
22	786	25	54	458	34	41	1490	129	682
23	653	22	39	483	34	45	3220	329	2980
24	547	23	34	532	46	65	3900	300	3210
25	496	18	25	571	56	89	2580	142	997
26	451	17	20	650	50	88	2950	129	1020
27	397	16	18	647	44	76	2780	117	875
28	364	17	16	581	33	52	2650	101	721
29	332	18	16	487	27	35	2570	101	704
30	400	21	23	430	23	27	2430	97	636
31	432	18	21	507	27	37	---	---	---
TOTAL	28137	---	3413	16260	---	1469	39218	---	16138
YEAR	1514325		620006.7						

GREEN RIVER BASIN

03310300 NOLIN RIVER AT WHITE MILLS, KY

LOCATION.--Lat 37°33'03", long 86°02'43", Hardin County, Hydrologic Unit 05110001, on right bank, 0.8 mi southwest of White Mills, 1.6 mi downstream from bridge on State Highway 84, and at mile 78.7.

DRAINAGE AREA.--357 mi^2, of which about 120 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 583.08 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 8, 1960, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--30 years, 493 ft^3/s, 18.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,400 ft^3/s, Apr. 29, 1970, gage height, 34.86 ft; minimum, 31 ft^3/s, Oct. 1, 1959, September 1964, gage height, 1.52 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1937 reached a stage of about 34 ft which is the highest since 1854. Flood of 1957 reached a stage of about 31 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0100	9,310	24.85	Feb. 14	2400	*19,200	*34.65
Dec. 25	0200	3,680	13.21	Feb. 22	0300	5,840	17.18
Dec. 28	2100	2,870	11.18	Mar. 6	2400	7,560	21.11
Jan. 8	1600	3,910	13.77	Mar. 21	1200	2,890	11.22
Jan. 12	1500	2,540	10.33	Mar. 31	1500	2,860	11.15
Jan. 15	1800	5,890	18.21	Apr. 4	1600	3,680	13.20
Feb. 4	1000	5,400	17.11				

Minimum daily discharge, 72 ft^3/s, Oct. 21, Sept. 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	87	795	938	449	1070	1610	281	208	256	184	150
2	193	82	703	814	428	984	1180	273	202	259	155	202
3	177	79	637	720	3000	925	1310	261	199	451	143	158
4	156	100	589	650	4830	869	2750	252	527	1090	133	129
5	139	555	533	588	2090	2260	2600	261	351	611	126	116
6	129	379	500	849	1480	6360	1630	266	311	461	216	109
7	122	297	467	889	1170	5400	1350	256	251	388	475	102
8	117	262	434	2930	989	2210	1170	236	230	342	251	98
9	109	231	400	2580	871	1690	1040	250	394	310	183	94
10	102	384	375	1370	762	1390	889	370	318	285	158	97
11	98	720	356	1100	694	1220	794	285	250	399	142	102
12	94	438	337	2060	656	1080	726	245	243	732	132	94
13	91	358	323	1930	1590	996	673	228	661	940	124	89
14	87	310	314	1950	11900	987	633	218	1080	534	119	86
15	81	274	298	5430	17400	893	629	209	954	390	112	84
16	79	251	280	3280	17500	793	635	203	1220	328	107	92
17	76	233	265	1680	9950	736	571	195	814	290	300	106
18	77	211	252	1370	4790	709	532	186	639	263	418	101
19	74	2710	240	1160	3300	701	506	179	707	311	219	91
20	73	8050	231	1000	2820	740	477	747	891	507	171	84
21	72	7700	271	872	4990	2380	452	435	826	325	150	80
22	74	2460	381	778	4750	1620	430	293	614	259	165	78
23	77	1600	1080	715	2520	1230	409	616	536	227	166	83
24	85	1240	2210	660	1990	1040	392	474	487	204	285	84
25	89	1050	3460	613	1660	921	373	328	413	193	483	83
26	84	952	1580	587	1500	828	359	436	369	182	308	80
27	78	1860	1140	604	1330	755	345	435	339	168	208	77
28	78	1360	1820	549	1180	710	328	308	325	167	169	73
29	99	1050	2100	514	---	697	314	266	302	167	144	72
30	100	905	1340	497	---	1040	298	246	277	156	136	72
31	92	---	1090	477	---	2070	---	224	---	154	128	---
TOTAL	3213	36188	24801	40154	106589	45304	25405	9462	14938	11349	6210	2966
MEAN	104	1206	800	1295	3807	1461	847	305	498	366	200	98.9
MAX	211	8050	3460	5430	17500	6360	2750	747	1220	1090	483	202
MIN	72	79	231	477	428	697	298	179	199	154	107	72
CFSM	.44	5.09	3.38	5.47	16.1	6.17	3.57	1.29	2.10	1.54	.85	.42
IN.	.50	5.68	3.89	6.30	16.73	7.11	3.99	1.49	2.34	1.78	.97	.47

CAL YR 1988 TOTAL 171486 MEAN 469 MAX 8050 MIN 47 CFSM 1.98 IN. 26.02
WTR YR 1989 TOTAL 326579 MEAN 895 MAX 17500 MIN 72 CFSM 3.78 IN. 51.26

03310400 BACON CREEK NEAR PRICEVILLE, KY

LOCATION.--Lat 37°21'31", long 85°59'53", Hart County, Hydrologic Unit 05110001, on right bank, 1.2 mi southwest of Priceville, 1.3 mi downstream from small unnamed tributary, 2.1 mi upstream from unnamed tributary, and at mile 7.2.

DRAINAGE AREA.--85.4 mi^2, of which about 31 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.13 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 1-5, 7-22, May 26 to June 8, 11, June 28 to July 1, 7-12, 16-31, and Aug. 8-16. Records good except those for estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--30 years, 59.4 ft^3/s, 9.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,800 ft^3/s, May 7, 1984, gage height, 20.11 ft; minimum, 3.7 ft^3/s, Oct. 22, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of November 1957 reached a stage of 21.8 ft, from floodmark. Floods in January 1937 and April 1957 reached a stage of about 8 ft lower than flood in November 1957, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0400	1,780	11.14	Feb. 3	2130	1,670	10.79
Dec. 23	1700	459	5.35	Feb. 14	1130	*5,120	*18.18
Dec. 25	0230	1,400	9.89	Feb. 21	1730	1,520	10.31
Jan. 8	1630	658	6.59	Mar. 6	1230	2,490	13.17
Jan. 15	0930	1,560	10.43	Apr. 4	1800	581	6.13

Minimum discharge, 11 ft^3/s, Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	13	60	106	61	126	107	38	37	46	73	21
2	26	13	54	96	68	120	91	37	36	49	51	24
3	25	12	48	90	1050	114	97	40	40	56	45	21
4	23	14	44	83	671	109	369	43	47	109	40	19
5	21	22	40	77	226	883	243	45	40	57	36	18
6	20	24	38	110	173	2010	152	38	35	51	50	18
7	19	19	38	104	142	392	130	37	33	50	103	17
8	18	17	37	402	125	235	117	36	31	49	42	17
9	17	16	36	170	111	183	104	40	43	48	35	16
10	16	29	36	127	103	155	93	50	39	47	34	16
11	16	48	36	125	98	138	85	47	36	46	32	16
12	15	36	34	320	93	126	78	45	45	45	30	15
13	14	32	31	263	463	117	72	43	239	146	29	15
14	14	29	28	365	3860	111	66	42	109	58	27	16
15	14	27	27	941	2640	100	75	41	227	53	23	18
16	14	24	25	248	2320	90	70	40	163	51	27	22
17	14	23	24	181	660	85	59	39	108	49	167	20
18	13	22	23	151	360	89	55	38	89	55	44	17
19	13	575	22	131	274	90	51	60	88	70	33	16
20	13	1330	22	117	245	85	48	125	157	90	30	15
21	13	353	22	106	985	179	46	100	93	76	28	15
22	13	147	30	99	383	125	44	60	75	70	28	16
23	13	114	303	94	257	108	43	212	66	60	26	17
24	13	96	519	89	207	100	42	53	60	40	27	16
25	15	84	563	84	185	93	41	40	55	35	27	15
26	12	78	145	82	171	87	41	36	51	28	35	15
27	12	162	118	85	151	81	40	50	50	26	24	14
28	14	100	231	75	138	76	40	45	49	25	23	14
29	15	80	197	70	---	74	40	43	48	24	22	14
30	15	68	133	68	---	81	39	40	47	23	22	15
31	14	---	117	65	---	167	---	39	---	30	22	---
TOTAL	502	3607	3081	5124	16220	6529	2578	1642	2236	1662	1235	508
MEAN	16.2	120	99.4	165	579	211	85.9	53.0	74.5	53.6	39.8	16.9
MAX	28	1330	563	941	3860	2010	369	212	239	146	167	24
MIN	12	12	22	65	61	74	39	36	31	23	22	14
CFSM	.30	2.21	1.83	3.04	10.6	3.87	1.58	.97	1.37	.99	.73	.31
IN.	.34	2.47	2.11	3.50	11.09	4.46	1.76	1.12	1.53	1.14	.84	.35

CAL YR 1988 TOTAL 19253.8 MEAN 52.6 MAX 1330 MIN 5.6 CFSM .97 IN. 13.17
WTR YR 1989 TOTAL 44924 MEAN 123 MAX 3860 MIN 12 CFSM 2.26 IN. 30.72

03311000 NOLIN RIVER AT KYROCK, KY

LOCATION.--Lat 37°16'42", long 86°14'51", Edmonson County, Hydrologic Unit 05110001, in intake structure of Nolin River Dam on Nolin River, 0.3 mi upstream from Dismal Creek, 1.1 mi northeast of Kyrock, and at mile 7.8.

DRAINAGE AREA.--703 mi^2, of which about 223 mi^2 does not contribute directly to surface runoff. Area at site used Oct. 1, 1960, to Sept. 30, 1973, 707 mi^2.

PERIOD OF RECORD.--October 1930 to March 1932, July 1939 to September 1950, October 1960 to current year.

GAGE.--Water-stage recorder and outflow gate dials. Datum of gage 400 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1932, nonrecording gage at site 1.3 mi upstream at datum 420.91 ft. June 30, 1939, to Dec. 20, 1940, nonrecording gage, and Dec. 21, 1940, to Sept. 30, 1950, water-stage recorder at site 11.6 mi upstream at datum 448.36 ft. Oct. 1, 1960, to Sept. 30, 1973, water-stage recorder at site 0.3 mi downstream at datum 400.00 ft. Oct. 1, 1960, to Sept. 30, 1970, auxiliary water-stage recorder on Green River at lock 6, at Brownsville, 9.6 mi downstream.

REMARKS.--No estimated daily discharge. Records good. Flow regulated since March 1963 by Nolin Lake (station 03310900). Discharge records computed using gate openings.

COOPERATION.--Record of discharge furnished by U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--41 years (Water years 1931, 1940-50, 1961-89), 942 ft^3/s, 18.20 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft^3/s, Jan. 30, 1932; maximum gage height, 59.27 ft, Mar. 2, 1962 (backwater from Green River), at site and datum then in use; no flow at times when gates are closed.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since 1854, 26.35 ft, in January 1937, from floodmarks, at site and datum used in 1939-50.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,100 ft^3/s, Mar. 17; minimum daily, 168 ft^3/s, June 3, 4, and Aug. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1070	797	6180	273	1560	6900	8750	413	350	267	267	266
2	531	795	6640	275	964	6860	8500	479	205	267	267	267
3	531	794	6570	275	632	5310	5840	434	168	605	267	267
4	531	793	6490	276	256	3130	2390	434	168	828	267	267
5	713	793	6400	277	260	1850	569	435	386	1180	267	267
6	804	793	6300	278	1710	446	574	435	534	1400	268	267
7	711	793	6200	279	4550	322	1710	435	534	1400	557	267
8	528	793	6100	281	5750	324	4070	435	534	1400	822	267
9	527	792	5320	284	6140	325	5140	436	1200	1390	821	267
10	527	793	4260	2340	5880	970	6020	489	1920	1390	820	267
11	696	795	2000	3990	5480	1610	7280	535	1080	1390	819	267
12	797	796	335	2020	5400	1620	6150	535	534	1170	623	267
13	796	796	246	578	5690	2090	4600	535	874	1020	484	266
14	794	649	246	468	2230	4330	2310	535	989	1390	233	266
15	793	916	246	297	550	7100	691	535	994	1380	168	266
16	791	1220	247	300	586	9500	273	535	519	639	168	266
17	808	1060	247	2850	606	10100	273	535	257	267	201	266
18	818	1060	247	7350	618	9990	274	535	258	267	268	427
19	816	1080	247	8810	624	9910	366	535	1050	267	268	532
20	815	553	247	8740	627	9830	548	537	2270	267	268	531
21	813	283	248	8660	632	8690	549	723	2840	440	268	531
22	812	792	248	8580	637	6420	549	1600	2830	535	614	530
23	810	3340	250	8470	640	6070	549	684	2820	535	820	530
24	809	3460	254	8360	642	7210	549	1640	2810	534	820	296
25	807	4500	259	8560	1870	8370	549	2180	2800	534	820	400
26	806	4580	262	8620	2980	8310	550	1180	2790	534	820	529
27	804	3820	263	8460	4470	8240	550	532	2010	534	819	529
28	803	3440	266	8280	6300	8170	452	533	654	387	818	528
29	802	4870	269	8090	---	6630	275	533	858	267	542	481
30	800	5630	271	7020	---	4610	275	532	573	267	266	430
31	799	---	273	4380	---	6300	---	500	---	267	266	---
TOTAL	23262	51576	67631	127721	68284	171537	71175	20414	35809	23018	14996	10807
MEAN	750	1719	2182	4120	2439	5533	2372	659	1194	743	484	360
MAX	1070	5630	6640	8810	6300	10100	8750	2180	2840	1400	822	532
MIN	527	283	246	273	256	322	273	413	168	267	168	266

CAL YR 1988 TOTAL 331547.00 MEAN 906 MAX 6640 MIN .00
WTR YR 1989 TOTAL 686230 MEAN 1880 MAX 10100 MIN 168

03311500 GREEN RIVER AT LOCK 6, AT BROWNSVILLE, KY

LOCATION.--Lat 37°12'25", long 86°15'40", Edmonson County, Hydrologic Unit 05110001, on right bank 200 ft upstream from lock and dam 6, 0.8 mi downstream from Indian Creek, 1.0 mi northeast of Brownsville, 1.8 mi downstream from Nolin River, and at mile 181.7.

DRAINAGE AREA.--2,762 mi^2, of which about 690 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1924 to September 1931, December 1936 to February 1937 (in WSP 838), July 1938 to current year.

REVISED RECORDS.--WSP 1385: 1925-29, 1939, 1945. WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 413.03 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 26, 1940, nonrecording gage at same site and datum. Auxiliary gage since Oct. 1, 1948, upper nonrecording gage at lock 5, 13.6 mi downstream.

REMARKS.--Estimated daily discharges: Mar. 9-14, Apr. 6-18, Aug. 6-14. Records fair. Flow regulated by Green River Lake (station 03305990) beginning February 1969 and Nolin Lake (station 03310900) beginning March 1963. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--58 years (Water years 1925-31, 1939-89), 4,368 ft^3/s, 21.48 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s, Jan. 24, 1937, gage height, 44.94 ft, from floodmarks; minimum daily, 120 ft^3/s, Sept. 18, 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 10, 1913, reached a stage of 42.8 ft, discharge, 103,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,500 ft^3/s, Feb. 17, gage height 34.03 ft; minimum daily, 788 ft^3/s, Aug. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2320	1730	12100	5320	8690	15600	15400	1490	1160	1980	1060	1020
2	1310	1710	12300	4510	7420	15700	16000	1530	998	1880	1100	1060
3	1240	1520	11900	3810	14600	14700	14200	1410	855	4820	1210	1070
4	1210	1360	11700	3270	20500	12000	16700	1390	792	5180	1190	1030
5	1290	1520	11400	2900	21600	14800	18700	1450	914	4850	1060	1010
6	1390	1570	11300	3490	14700	24100	22000	1540	1100	4670	1400	998
7	1330	1710	11100	5420	13100	29600	18000	1700	1100	3920	1500	976
8	1010	1960	10900	7990	13300	29700	15000	1600	1120	3260	1600	948
9	911	1820	10300	11700	13600	25000	14000	1620	1610	3000	1800	909
10	896	2210	8560	12600	13100	15000	12000	2180	2530	2900	2000	876
11	977	3050	6050	13200	12300	10000	13000	2720	2070	2940	1800	845
12	1150	4060	3040	16000	12100	9000	13000	2590	2050	3280	1600	829
13	1160	3250	2480	18900	13800	10000	11000	2450	8250	3110	1200	813
14	1150	2510	2260	20200	29500	12000	11000	2410	12000	3560	1000	803
15	1150	2250	2060	21700	43300	13500	11000	2330	12100	3080	855	811
16	1150	2810	2010	21100	55300	15600	10000	2260	17600	2110	838	922
17	1210	2420	1980	15000	58700	16500	9200	1940	15200	1350	788	1940
18	1290	2360	1950	15200	51000	16600	8600	1530	8330	1220	814	3130
19	1290	7650	1910	16500	37400	16500	8360	1440	7490	1420	898	2080
20	1290	16400	1900	16400	19300	16400	8390	2770	9550	1450	980	1640
21	1290	20800	2650	15900	18400	17300	8130	2020	10300	1340	992	1710
22	1290	19200	4430	15400	26000	19500	6960	2650	10100	1390	1160	1700
23	1300	10500	9740	15000	30000	18800	5490	2910	9650	1550	1390	2290
24	1300	9890	15400	14700	23800	16700	3780	4210	9240	1340	1600	4590
25	1300	10600	20500	14600	11900	17200	3100	4220	8000	1180	1930	4220
26	1300	10600	22800	14700	10800	17100	2780	2870	6530	1130	1860	3460
27	1540	11500	14000	14600	12100	17500	2280	1610	5400	1090	1780	3680
28	1730	12100	7800	14500	14300	17100	1940	1450	2860	1020	1670	3550
29	1730	12300	10000	14200	---	14000	1650	1440	2780	934	1480	3420
30	1720	12300	9260	13500	---	11900	1560	1400	2510	931	1090	3300
31	1690	---	6410	11400	---	12800	---	1330	---	985	980	---
TOTAL	40914	193660	260190	393710	620610	512200	303220	64460	174189	72870	40725	55630
MEAN	1320	6455	8393	12700	22160	16520	10110	2079	5806	2351	1314	1854
MAX	2320	20800	22800	21700	58700	29700	22000	4220	17600	518	2000	4590
MIN	896	1360	1900	2900	7420	9000	1560	1330	792	931	788	803

CAL YR 1988 TOTAL 1217418 MEAN 3326 MAX 22800 MIN 285
WTR YR 1989 TOTAL 2732378 MEAN 7486 MAX 58700 MIN 788

GREEN RIVER BASIN

03311600 BEAVERDAM CREEK AT RHODA, KY

LOCATION.--Lat 37°09'18", long 86°13'35", Edmonson County, Hydrologic Unit 05110001, on right bank, 50 ft upstreamfrom bridge on State Highway 101, 0.1 mi south of Rhoda, 3.4 mi upstream from Shingle Machine Branch, and at mile 7.1.

DRAINAGE AREA.--10.9 mi^2.

PERIOD OF RECORD.--October 1972 to current year. Occasional low-flow measurements, water years 1961-72.

REVISED RECORDS.--WRD KY-84-1: 1975 (M).

GAGE.--Water-stage recorder. Datum of gage is 513.81 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--17 years, 18.8 ft^3/s, 23.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,850 ft^3/s, May 7, 1984, gage height, 11.38 ft; minimum, 0.09 ft^3/s, Aug. 17, 18, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 1, 1962, reached a stage of about 16 ft, discharge not determined, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0215	990	6.11	Feb. 21	0130	954	6.03
Dec. 24	0915	1,190	6.52	Mar. 5	2130	1,410	6.93
Jan. 14	1545	986	6.10	Apr. 4	0300	773	5.61
Feb. 3	0800	945	6.01	June 13	0330	1,210	6.56
Feb. 14	0600	1,870	7.72	July 3	0730	*2,670	*8.88

Minimum discharge, 0.81 ft^3/s, several days in Aug. and Sept.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	4.3	8.8	17	9.4	8.6	18	2.1	1.3	2.7	3.8	1.1
2	1.9	4.3	7.2	13	49	7.9	14	2.1	1.3	5.9	1.5	1.3
3	1.6	4.3	6.6	12	495	7.7	49	2.0	1.3	850	1.3	.91
4	1.4	12	5.8	9.6	74	7.2	262	2.3	1.2	119	1.3	.81
5	1.3	17	5.0	21	34	733	4[illegible]	5.6	1.3	48	1.3	.81
6	1.2	10	4.7	59	21	231	26	4.4	1.2	20	2.4	.81
7	1.1	6.2	4.5	23	15	48	19	2.5	1.1	13	1.8	.81
8	1.1	4.3	3.8	63	12	26	18	2.1	1.2	9.2	1.2	.81
9	1.1	3.1	3.3	20	9.6	19	14	6.2	1.4	6.9	1.2	.82
10	1.1	52	3.1	15	8.7	15	11	5.0	1.2	5.3	1.1	.89
11	1.2	14	2.7	94	8.5	13	9.8	2.4	1.0	4.1	.98	.92
12	1.2	8.9	2.3	235	7.7	11	8.9	2.0	248	5.1	.96	.98
13	1.2	6.7	2.4	54	231	10	8.0	2.0	360	7.6	.87	.98
14	1.2	5.1	2.4	339	893	9.3	7.6	3.5	62	3.9	.82	1.2
15	1.3	4.3	2.2	102	781	8.0	1[illegible]	2.2	146	3.0	.81	1.4
16	1.3	4.3	2.0	37	269	6.7	10	1.7	38	2.4	.81	6.5
17	1.4	5.0	2.0	24	68	6.5	8.4	1.5	17	2.1	.81	1.5
18	1.5	3.3	1.9	18	33	10	7.4	1.5	28	1.9	.81	.97
19	1.5	408	1.9	14	22	9.0	6.4	1.5	48	38	.81	.89
20	1.6	374	2.0	12	124	37	5.7	111	20	6.1	.84	.89
21	1.7	41	103	9.7	299	63	5.4	10	13	3.1	.87	.89
22	1.7	21	24	9.0	45	20	4.9	9.5	9.4	2.1	.81	1.1
23	2.3	15	265	8.3	24	14	4.5	18	6.3	1.7	1.0	1.7
24	2.7	12	395	7.7	17	12	4.0	6.1	4.7	1.7	1.5	1.4,
25	3.1	9.4	54	7.1	15	10	3.6	3.6	3.5	1.6	1.3	1.2
26	3.3	45	26	22	13	9.0	3.1	2.4	2.7	1.5	.89	1.1
27	4.1	53	19	14	12	8.3	2.8	2.1	2.3	1.5	.89	1.0
28	7.0	21	129	10	11	8.0	2.4	1.7	2.3	1.4	.84	.99
29	5.8	13	33	10	---	9.2	2.2	1.6	2.0	1.3	.81	1.2
30	4.7	11	22	16	---	13	2.1	1.5	1.8	1.4	.81	1.5
31	4.3	---	17	11	---	60	---	1.4	---	2.6	.81	---
TOTAL	67.8	1192.5	1161.6	1306.4	3600.9	1450.4	600.2	221.5	1028.5	1174.1	35.95	37.38
MEAN	2.19	39.7	37.5	42.1	129	46.8	20.0	7.15	34.3	37.9	1.16	1.25
MAX	7.0	408	395	339	893	733	262	111	360	850	3.8	6.5
MIN	1.1	3.1	1.9	7.1	7.7	6.5	2.1	1.4	1.0	1.3	.81	.81
CFSM	.20	3.65	3.44	3.87	11.8	4.29	1.84	.66	3.15	3.47	.11	.11
IN.	.23	4.07	3.96	4.46	12.29	4.95	2.05	.76	3.51	4.01	.12	.13

CAL YR 1988 TOTAL 5864.10 MEAN 16.0 MAX 421 MIN .09 CFSM 1.47 IN. 20.01
WTR YR 1989 TOTAL 11877.23 MEAN 32.5 MAX 893 MIN .81 CFSM 2.99 IN. 40.54

03313000 BARREN RIVER NEAR FINNEY, KY

LOCATION.--Lat 36°53'42", long 86°08'02", Allen County, Hydrologic Unit 05110002, on left bank, 1,200 ft upstream from Port Oliver Ford, 2,500 ft upstream from Difficult Creek, 0.5 mi downstream from Barren River Dam, 2.1 mi southwest of Finney, and at mile 78.7.

DRAINAGE AREA.--942 mi^2, of which 77 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1941 to September 1950, October 1960 to current year. Prior to October 1950 published as "at Port Oliver Ford." Monthly discharge only for October to December 1941, published in WSP 1305.

REVISED RECORDS.--WSP 1113: 1945-46(M). WRD KY-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 11, 1943, nonrecording gage, and Oct. 11, 1943 to Sept. 30, 1950, water-stage recorder at same site at datum 73.52 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Barren River Lake (station 03312900) beginning March 1964. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--38 years (Water years 1942-50, 1961-89), 1,489 ft^3/s, 21.47 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,000 ft^3/s, Feb. 27, 1962, gage height, 110.6 ft, from graph based on gage readings; no flow, Oct. 5-12, Dec. 17, 1976 (gates closed for repairs).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,130 ft^3/s, Apr. 12, gage height, 87.75 ft; minimum daily, 197 ft^3/s, Sept. 9.

REVISIONS.--The maximum gage heights for the water years 1984, 1987, and 1988 have been revised to 87.86 ft, 87.21 ft, and 86.50 ft respectively.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	1240	3360	323	4120	4270	4380	3150	2900	3120	953	1390
2	258	1230	3340	313	3850	4260	4550	3130	2900	2940	952	1400
3	251	1230	3320	308	3030	3380	4140	3130	2900	2050	949	1400
4	249	1240	3300	303	2980	2130	3510	3120	2900	1400	704	1390
5	243	1240	3280	301	3130	2120	3260	3110	2800	2600	466	1100
6	237	1230	3260	1600	3530	1100	3210	3110	2800	2900	468	928
7	241	1220	3250	2750	4000	756	3790	3100	2800	2900	461	466
8	244	1220	3220	2620	4070	2190	4290	3100	2800	2900	455	198
9	242	1220	3190	2810	4040	3980	4580	3090	2800	2900	456	197
10	242	1240	3170	3110	4020	4440	4900	3090	2800	2900	457	202
11	241	1220	3200	2290	4000	4430	5110	3080	2800	2900	313	204
12	242	1210	3200	1460	3980	4410	5110	3070	2700	2900	216	202
13	239	1210	3200	1230	2790	4400	5090	3070	2300	2900	221	202
14	236	1200	3200	2100	1740	4390	5080	3070	1600	2870	222	215
15	235	1200	3200	927	1390	4370	5080	3060	1100	2840	220	525
16	236	1200	2700	1700	944	4340	5070	3040	1100	2830	220	1080
17	897	1460	2400	2700	740	4340	5060	3040	1730	2810	220	1240
18	1280	1630	2400	2890	677	4330	5060	3030	2650	2790	218	1240
19	1270	938	1900	3350	2020	4000	5040	3010	3120	2790	216	1170
20	1260	727	1110	4100	2370	3390	5030	3040	3090	2770	209	1900
21	1260	650	491	4070	1610	3560	5020	3000	3070	2760	201	1900
22	1250	2080	467	4040	805	4200	5010	3030	3060	2750	202	1910
23	1260	3110	565	4030	1070	4800	5010	3050	3040	2740	202	1930
24	1260	3480	1090	4020	1750	4800	4180	3020	3030	2720	968	1940
25	1250	3450	459	3990	2300	4800	3430	3010	3020	2710	2080	2370
26	1250	3570	370	3980	3290	4700	3200	3010	3000	2700	2670	2800
27	1250	2720	342	3950	3850	4600	3200	3000	1810	2690	2650	2790
28	1260	2770	459	3920	4190	4200	3190	3000	2660	2170	2650	2780
29	1240	3410	381	3900	---	3300	3170	3000	2920	1530	2640	2780
30	1240	3390	348	3900	---	2200	3160	3000	2900	1100	2630	2800
31	1240	---	330	4040	---	3260	---	2900	---	957	1870	---
TOTAL	22362	52935	64502	81025	76286	115446	129910	94660	79100	79837	27359	40649
MEAN	721	1764	2081	2614	2724	3724	4330	3054	2637	2575	883	1355
MAX	1280	3570	3360	4100	4190	4800	5110	3150	3120	3120	2670	2800
MIN	235	650	330	301	677	756	3160	2900	1100	957	201	197

CAL YR 1988 TOTAL 302021 MEAN 825 MAX 3930 MIN 48
WTR YR 1989 TOTAL 864071 MEAN 2367 MAX 5110 MIN 197

03313700 WEST FORK DRAKES CREEK NEAR FRANKLIN, KY

LOCATION.--Lat 36°43'24", long 86°33'08", Simpson County, Hydrologic Unit 05110002, near left bank at upstream side of city of Franklin pumping plant intake, 20 ft upstream from dam, 0.8 mi downstream from bridge on State Highway 73 and 100, 1.5 mi east of Franklin, 3.3 mi downstream from Sharps Branch, and at mile 46.7.

DRAINAGE AREA.--110 mi^2, of which about 19 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 581.54 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1981, at site 0.8 mi upstream at datum 8.05 ft lower.

REMARKS.--Estimated daily discharges: Jan. 11-16, Feb. 3-9, 13-24, Mar. 5-10, Mar. 16 to Apr. 25. Records fair except those for estimated daily discharges which are poor. Subsequent to Apr. 24, 1976, records of daily discharge less than about 300 ft^3/s does not include approximately 3 ft^3/s which is diverted by city of Franklin for municipal supply. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--21 years, 198 ft^3/s, 24.44 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,300 ft^3/s Mar. 12, 1975, gage height, 23.20 ft, site and datum then in use; no flow part or all of each day Sept. 17-23, 1985, Aug. 13 to Sept. 2, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1130	3,100	6.16	Mar. 6	Unknown	e6,200	Unknown
Dec. 24	1500	5,450	7.47	June 15	0930	6,180	7.79
Feb. 14	Unknown	e*8,000	Unknown	July 3	0630	2,850	5.98
Feb. 21	Unknown	e7,400	Unknown				

e Estimated.

Minimum daily discharge, 2.7 ft^3/s, Oct. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.9	137	309	121	302	900	45	20	135	32	13
2	16	6.2	103	244	108	273	760	44	18	358	33	24
3	12	7.1	85	212	500	254	800	50	18	1830	29	21
4	11	7.8	72	178	1100	241	2200	53	23	983	27	15
5	7.0	39	61	157	700	1200	2000	85	24	730	25	11
6	4.0	93	55	450	450	5800	1500	105	43	444	27	10
7	3.3	60	52	417	300	2500	1100	69	32	322	33	9.2
8	3.4	39	46	596	200	1500	860	53	24	238	27	8.8
9	3.6	30	41	536	160	700	640	51	231	187	23	9.6
10	3.5	40	38	455	135	460	450	57	83	149	20	13
11	3.4	55	35	600	129	380	370	48	47	206	19	21
12	3.0	48	32	1400	117	310	300	43	66	303	18	30
13	2.9	38	30	1000	600	264	230	39	1390	412	17	20
14	2.7	32	30	1700	6200	232	190	35	545	252	16	128
15	2.7	22	28	1100	7600	195	150	34	3620	172	14	86
16	3.7	22	25	600	3000	160	130	33	1090	137	15	116
17	4.6	27	24	525	1500	150	120	31	588	114	14	65
18	5.6	30	23	418	1100	140	110	29	439	91	13	36
19	5.4	85	23	327	900	130	98	29	778	87	13	17
20	2.9	1480	24	263	800	250	90	532	534	99	13	13
21	4.2	513	256	206	7000	2000	82	176	427	80	12	9.5
22	4.7	266	406	179	2000	1700	76	108	289	69	12	11
23	5.1	177	975	159	1000	1400	72	123	213	59	11	783
24	8.0	132	1890	140	600	1000	68	72	165	52	15	219
25	8.1	101	710	127	510	800	64	54	135	50	40	110
26	10	143	568	116	436	600	57	47	105	47	27	78
27	9.6	925	416	113	369	420	54	42	94	40	20	57
28	14	413	557	99	323	350	53	36	126	39	15	38
29	23	250	625	94	---	500	50	32	108	37	13	19
30	14	181	514	122	---	700	46	26	79	32	12	50
31	9.7	---	378	131	---	1000	---	23	---	31	12	---
TOTAL	224.1	5270.0	8259	12973	37958	25911	13620	2204	11354	7785	617	2041.1
MEAN	7.23	176	266	418	1356	836	454	71.1	378	251	19.9	68.0
MAX	23	1480	1890	1700	7600	5800	2200	532	3620	1830	40	783
MIN	2.7	6.2	23	94	108	130	46	23	18	31	11	8.8
CFSM	.07	1.60	2.42	3.80	12.3	7.60	4.13	.65	3.44	2.28	.18	.62
IN.	.08	1.78	2.79	4.39	12.84	8.76	4.61	.75	3.84	2.63	.21	.69

CAL YR 1988 TOTAL 40811.99 MEAN 112 MAX 1890 MIN .00 CFSM 1.01 IN. 13.80
WTR YR 1989 TOTAL 128216.2 MEAN 351 MAX 7600 MIN 2.7 CFSM 3.19 IN. 43.36

03314500 BARREN RIVER AT BOWLING GREEN, KY

LOCATION.--Lat 37°00'04", long 86°25'51", Warren County, Hydrologic Unit 05110002, near left bank on downstream side of College Street bridge, 600 ft downstream from bridge on U.S. Highways 31W and 68 at Bowling Green, 800 ft upstream from Louisville and Nashville Railroad bridge, 6.0 mi downstream from Drakes Creek, 8.9 mi upstream from Jennings Creek, and at mile 37.6.

DRAINAGE AREA.--1,849 mi^2, of which about 490 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--June 1938 to current year. Gage-height records collected in vicinity since 1901 are published in reports of National Weather Service (prior to 1940 records are for site about 7 mi downstream and are fragmentary prior to July 1924).

REVISED RECORDS.--WSP 1385: 1943, 1945, 1946(M). WRD KY-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 409.83 ft above National Geodetic Vertical Datum of 1929. Prior to June 21, 1944, nonrecording gage at same site and datum. Auxiliary water-stage recorder at Tennessee Valley Authority steam powerplant, 7.7 mi downstream. Aug. 10, 1939, to Dec. 31, 1942, auxiliary water-stage recorder or nonrecording gage at site 8.0 mi downstream from base gage.

REMARKS.--No estimated daily discharge. Records good. Flow regulated by Barren River Lake (station 03312900) beginning March 1964. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--51 years, 2,592 ft^3/s, 19.04 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 85,000 ft^3/s, Feb. 28, 1962, gage height, 49.55 ft; minimum, 44 ft^3/s, Sept. 19, 20, 1954, gage height, 4.03 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 8, 1913, reached a stage of 52.2 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,400 ft^3/s, Feb. 22, maximum gage height, 34.02 ft, Feb. 15; minimum daily, 275 ft^3/s, Aug. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	454	1360	4360	2590	4960	6320	8050	3790	3360	4600	1360	2130
2	428	1360	4150	2140	4900	6180	7440	3770	3330	9550	1360	1900
3	397	1350	4040	1830	5420	6010	7710	3740	3310	12000	1350	1910
4	375	1380	3910	1630	7960	4390	11300	3740	3290	12600	1340	1860
5	362	1460	3820	1440	6310	7180	13700	3790	3300	8340	974	1820
6	350	1460	3750	1870	5210	25300	8560	3820	3310	7340	800	1410
7	338	1540	3700	4610	5430	20600	7060	3830	3290	6230	819	1300
8	333	1500	3640	7320	5550	7010	7120	3770	3320	5530	774	743
9	332	1450	3590	7060	5290	7390	7180	3760	4310	5050	729	399
10	329	1620	3540	6050	5120	7760	6860	3740	4230	4700	700	361
11	323	1840	3510	5030	5010	7410	7070	3700	3630	4510	682	359
12	319	1720	3480	8010	4960	6970	6870	3650	3650	4740	517	375
13	317	1590	3430	11000	4900	6620	6780	3620	8270	6000	359	422
14	317	1510	3380	7560	10800	6380	6610	3590	8320	5410	339	408
15	313	1470	3340	9710	27400	6200	6560	3560	9800	4690	334	611
16	315	1450	3300	6330	22700	6090	6520	3530	16000	4320	325	1170
17	316	1430	2990	5780	20700	5910	6350	3510	6450	4120	322	1830
18	929	1750	2810	5440	12000	5840	6300	3490	4920	3940	340	1770
19	1290	2680	2760	5010	8960	5860	6250	3480	6970	4230	327	1640
20	1310	7110	1990	5480	9320	5170	6220	4510	6920	4000	314	1740
21	1320	7760	1430	5490	20800	8400	6170	4840	5840	3900	303	2290
22	1320	3250	2970	5280	26400	11100	6100	3950	5150	3760	283	2300
23	1330	3960	3600	5130	14700	8100	6010	4910	4660	3680	275	2760
24	1330	4370	9080	5000	7890	7360	5850	4140	4300	3610	540	3640
25	1330	4230	16200	4900	4480	6860	4580	3770	4060	3550	1950	2960
26	1320	4130	5940	4830	5400	6540	4030	3630	3910	3500	3100	3340
27	1320	6970	3390	4750	6200	6270	3950	3600	3680	3460	3420	3380
28	1370	5370	3720	4700	6460	5830	3910	3560	2630	3390	3250	3280
29	1360	4930	6610	4660	---	5710	3860	3490	3680	2640	3310	3240
30	1350	4630	3690	4650	---	5980	3820	3430	3750	2000	3270	3300
31	1370	---	3010	4780	---	6080	---	3390	---	1450	3210	---
TOTAL	24167	86630	129130	160060	275230	238820	198790	117100	151640	156840	36976	54648
MEAN	780	2888	4165	5163	9830	7704	6626	3777	5055	5059	1193	1822
MAX	1370	7760	16200	11000	27400	25300	13700	4910	16000	12600	3420	3640
MIN	313	1350	1430	1440	4480	4390	3820	3390	2630	1450	275	359

CAL YR 1988 TOTAL 570443 MEAN 1559 MAX 16200 MIN 75
WTR YR 1989 TOTAL 1630031 MEAN 4466 MAX 27400 MIN 275

03315500 GREEN RIVER AT LOCK 4, AT WOODBURY, KY

LOCATION.--Lat 37°10'56", long 86°37'48", Butler County, Hydrologic Unit 05110003, on left bank 0.1 mi upstream from destroyed lock 4, at Woodbury, 0.3 mi downstream from Barren River, and at mile 149.2.

DRAINAGE AREA.--5,404 mi^2, of which about 1,360 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--December 1936 to February 1937 (in WSP 838), October 1937 to current year. Gage-height records collected at same site since 1917 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 1385: 1944-45. WRD KY-80-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 389.60 ft above National Geodetic Vertical Datum of 1929. Prior to September 1940, nonrecording gage at site 0.1 mi downstream at lock 4, at same datum. Auxiliary water-stage recorder 7.8 mi downstream at datum 373.62 ft NGVD; prior to Oct. 1, 1955, nonrecording gages 6.0 mi and 7.8 mi downstream.

REMARKS.--Estimated daily discharge: Oct. 1 to Dec. 21, Jan. 8-19, Feb. 22 to Mar. 9, Mar. 27 to Apr. 18, June 10 to July 23, Aug. 26-29 and Sept. 23-30. Records fair except those for estimated daily discharge which are poor. Flow regulated by Green River Lake (station 03305990) beginning February 1969, Nolin Lake (station 03310900) beginning March 1963, and Barren River Lake (station 03312900) beginning March 1964. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--52 years (Water years 1938-89), 6,452 ft^3/s, 21.24 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 205,000 ft^3/s, Jan. 25, 1937, gage height, 43.1 ft; minimum daily, 200 ft^3/s, Sept. 14-16, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 11, 1913, reached a stage of 38.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 92,300 ft^3/s, Feb. 17, maximum gage height, 42.95 ft, Feb. 17, minimum daily, 1,350 ft^3/s, Sept. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	3800	19000	12000	18700	29000	29000	6880	5070	8000	3100	4110
2	2700	3700	19000	9530	16300	29000	28000	6960	4810	15000	3050	3460
3	2200	3500	19000	8310	32400	28000	27000	5950	4560	18000	2780	3550
4	1800	3300	18000	7530	42100	26000	33000	5640	4390	20000	2760	3270
5	1900	3500	18000	6970	41800	45000	37000	6120	4540	16000	2580	3160
6	2000	3600	18000	8290	37200	77000	35000	7310	4700	14000	2780	2830
7	1900	3800	17000	11400	29700	80000	32000	7300	4720	12000	3960	2520
8	1800	4000	17000	19000	25600	78000	28000	7290	4710	10000	3680	2310
9	1400	3900	17000	25000	24400	64000	25000	7200	6090	9000	3150	1810
10	1500	4700	16000	24000	23300	36500	22000	7510	9000	8400	2740	1420
11	1600	5600	14000	30000	22000	27500	23000	7970	8000	8200	2480	1360
12	1700	6600	11000	40000	21400	22600	22000	7730	7800	8800	2360	1350
13	1700	5800	8000	50000	24600	20200	21000	7550	17000	9400	2020	1370
14	1600	5200	6600	48000	51400	20400	21000	7610	23000	9200	1780	1410
15	1600	4500	6400	60000	69400	23100	21000	7500	30000	8800	1560	1590
16	1800	5000	6200	54000	87000	25300	20000	7430	35000	8000	1470	1800
17	1900	4700	6000	49000	91000	27200	19000	7330	30000	7000	1400	2750
18	2000	5200	5800	47000	84000	27800	18000	6060	17000	5800	1440	4510
19	3100	15000	5600	37000	73400	27800	17100	5410	18000	6400	1550	4710
20	3200	27000	5000	29300	62100	27400	16800	13100	19000	6200	1610	3670
21	3200	33000	5400	28300	56500	31000	16600	12000	18000	6000	1600	3850
22	3200	28000	8660	26900	70000	37200	15700	8810	17000	5800	1610	4100
23	3300	20000	21500	25800	64000	36600	13800	9310	16000	5700	2050	5000
24	3300	18000	33400	24800	50000	33100	11200	10000	15000	5570	2300	9000
25	3200	19000	44500	24200	40000	30800	9360	9500	14000	5270	3370	8000
26	3200	19000	44700	24200	24000	29900	8260	8690	13000	5070	5290	7300
27	3400	23000	36800	24500	25000	30000	7610	7350	12000	4940	6000	7400
28	3600	21000	27900	24000	26000	29000	7330	6590	7000	4810	5800	7600
29	3800	20000	26500	23500	---	27000	7080	5590	7800	4420	5400	7200
30	3800	20000	23400	23100	---	22000	6910	5410	7600	3690	5000	7200
31	3800	---	16500	21400	---	23000	---	5260	---	3330	4500	---
TOTAL	78200	343400	541860	847030	1233300	1071400	598750	234360	384790	262800	91170	119610
MEAN	2523	11450	17480	27320	44050	34560	19960	7560	12830	8477	2941	3987
MAX	3800	33000	44700	60000	91000	80000	37000	13100	35000	20000	6000	9000
MIN	1400	3300	5000	6970	16300	20200	6910	5260	4390	3330	1400	1350

CAL YR 1988 TOTAL 2226467 MEAN 6083 MAX 44700 MIN 530
WTR YR 1989 TOTAL 5806670 MEAN 15910 MAX 91000 MIN 1350

03318500 ROUGH RIVER AT FALLS OF ROUGH, KY

LOCATION.--Lat 37°35'20", long 86°33'05", Grayson County, Hydrologic Unit 05110004, on left bank 150 ft downstream from bridge on State Highway 110 at Falls of Rough, 3.2 mi downstream from Rock Lick Creek, 6.4 mi downstream from Rough River Dam, and at mile 82.9.

DRAINAGE AREA.--504 mi^2, of which about 110 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1939 to current year (low-water periods only prior to October 1948, published as "near Falls of Rough"). Prior to January 1940 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 420.94 ft above National Geodetic Vertical Datum of 1929. July 12, 1940 to June 27, 1941, nonrecording gage at datum 1.79 ft lower and June 27, 1941 to Oct. 21, 1948, water-stage recorder at datum 2.79 ft lower, at site 1,000 ft downstream.

REMARKS.--Estimated daily discharges: Oct. 1-5 and Sept. 16-30. Records good. Flow regulated by Rough River Lake (station 03318005) beginning October 1959. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--41 years (water years 1949-89), 771 ft^3/s, 20.77 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s, Jan. 14, 1950, gage height, 28.87 ft; minimum daily, 6.0 ft^3/s, Aug. 13, 1944, Dec. 22, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stages for other floods at present datum, from floodmarks, are as follows: 28.96 ft, 1913; 28.93 ft, 1915; 29.31 ft, March 1935; 34.06 ft, Jan. 25, 1937.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,150 ft^3/s, Feb. 14, gage height, 23.92 ft; minimum daily, 19 ft^3/s, Apr. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	529	2390	1100	2120	3260	1450	346	274	241	348	122
2	108	529	2160	1030	2140	3370	2400	434	469	307	516	139
3	108	528	1710	1010	3450	3000	2610	531	302	424	514	112
4	109	566	2330	985	1600	1960	2480	314	808	303	514	108
5	109	621	2320	1010	428	1960	1170	119	1140	338	276	158
6	109	561	2300	1550	320	855	2260	121	1110	398	96	240
7	109	546	2280	1140	909	1160	3130	120	956	952	93	234
8	108	535	2270	1510	1850	2090	3630	119	385	1290	91	228
9	108	527	2250	1110	2160	3010	3720	324	335	1330	91	231
10	109	546	2230	1160	2150	3560	3730	481	562	1600	91	238
11	109	551	2200	1140	2130	3830	3710	723	850	1720	91	233
12	108	532	2190	1100	2120	3890	3720	821	1080	1580	79	231
13	109	529	2170	1100	2970	3910	3810	440	1360	1220	57	231
14	109	524	2150	1970	5350	3910	3820	245	462	1010	57	208
15	310	522	2130	1480	4330	3870	3820	244	369	1250	57	176
16	524	524	2110	860	3230	3850	3790	242	381	1450	57	190
17	523	634	2090	1400	1190	3830	3760	174	1080	1210	58	190
18	532	774	2060	1760	403	3810	3730	116	1260	639	59	190
19	529	2200	2020	2140	299	3650	3700	275	689	112	59	190
20	527	2850	1940	2310	1390	3070	3380	1480	1390	315	59	180
21	530	905	1390	2290	2380	2880	2490	1170	1770	462	60	130
22	530	213	702	2270	567	2310	2100	1580	1760	461	59	240
23	539	171	547	2250	687	3060	1930	1870	1750	460	61	240
24	538	714	1340	2230	1790	3590	1720	1970	1740	370	66	240
25	536	1550	719	2200	2170	3710	1250	1840	1740	197	83	220
26	534	1460	517	2250	2430	3730	370	1550	1730	107	67	200
27	537	999	708	2260	2770	3650	23	1180	1630	106	61	190
28	538	1080	2020	2200	3060	3070	19	406	1270	101	86	190
29	535	1840	1370	2180	---	2340	21	245	1260	93	107	190
30	532	2300	1070	2180	---	824	112	240	998	92	108	190
31	530	---	1030	2150	---	1370	---	233	---	97	109	---
TOTAL	10344	26360	54713	51325	56393	92379	73855	19953	30910	20235	4130	5859
MEAN	334	879	1765	1656	2014	2980	2462	644	1030	653	133	195
MAX	539	2850	2390	2310	5350	3910	3820	1970	1770	1720	516	240
MIN	108	171	517	860	299	824	19	116	274	92	57	108
CFSM	.66	1.74	3.50	3.29	4.00	5.91	4.88	1.28	2.04	1.30	.26	.39
IN.	.76	1.95	4.04	3.79	4.16	6.82	5.45	1.47	2.28	1.49	.30	.43

CAL YR 1988 TOTAL 239244 MEAN 654 MAX 3490 MIN 25 CFSM 1.30 IN. 17.66
WTR YR 1989 TOTAL 446456 MEAN 1223 MAX 5350 MIN 19 CFSM 2.43 IN. 32.95

03318800 CANEY CREEK NEAR HORSE BRANCH, KY

LOCATION.--Lat 37°27'50", long 86°39'20", Ohio County, Hydrologic Unit 05110004, on right bank 9 ft downstream from bridge on U.S. Highway 62, 0.7 mi upstream from Horse Branch, 1.5 mi northeast of village of Horse Branch, and at mile 12.1.

DRAINAGE AREA.--124 mi^2, includes that of Horse Branch at U.S. Highway 62.

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WRD KY 82-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 416.30 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at datum 1.00 ft higher. Prior to Nov. 20, 1956, nonrecording gage at same site and higher datum.

REMARKS.--Estimated daily discharges: Dec. 20 to Feb. 16, Feb. 25 to Mar. 4, Apr. 11 to May 10, May 28 to June 14 and July 5-25. Records fair except those for estimated daily discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in miscellaneous water-quality data section.

AVERAGE DISCHARGE.--33 years, 190 ft^3/s, 20.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s, May 7, 1984, gage height, 13.96 ft; maximum gage height, 15.43 ft, Nov. 18, 1957, present datum, backwater from Rough River or debris; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0400	6,990	11.88	Mar. 5	2100	3,500	8.77
Dec. 25	Unknown	e2,000	Unknown	Mar. 21	0600	1,590	6.33
Jan. 15	Unknown	e2,500	Unknown	Mar. 31	0400	2,630	7.78
Feb. 3	Unknown	e6,000	Unknown	Apr. 4	0400	2,970	8.19
Feb. 14	Unknown	*9,000	*13.80	June 13	1130	2,230	7.15
Feb. 21	0200	3,210	8.45				

e Estimated

Minimum daily discharge, 0.19 ft^3/s, Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	24	94	90	45	100	1090	21	9.0	25	46	6.7
2	27	19	78	80	200	90	479	19	6.5	54	27	120
3	44	15	67	70	4000	82	445	17	20	507	16	51
4	26	32	61	62	1200	78	2130	16	79	635	11	22
5	15	383	50	58	500	1900	1090	14	74	150	6.1	12
6	8.7	214	45	200	250	2440	449	14	62	40	39	6.3
7	5.3	131	42	180	140	1150	314	16	53	39	97	2.3
8	2.5	92	40	700	110	576	254	17	43	37	44	1.3
9	1.3	65	35	400	94	283	204	20	34	35	23	1.0
10	1.1	270	30	150	84	181	157	40	27	33	14	3.5
11	.94	346	26	160	78	145	130	34	23	30	8.7	1.3
12	.80	130	20	500	70	113	98	31	22	130	4.7	1.2
13	.57	89	21	350	500	94	80	23	1800	559	2.5	1.1
14	.26	65	18	700	8800	85	80	17	350	50	1.5	.82
15	.19	52	20	1500	8000	74	89	14	432	40	1.2	.75
16	.51	49	15	900	8200	59	78	12	269	37	1.0	.75
17	.34	45	14	250	4800	51	68	7.6	172	35	165	.75
18	.67	38	11	180	2390	75	61	4.0	163	40	60	.75
19	.79	3860	12	120	1340	89	54	2.1	452	80	32	.75
20	.77	5810	15	100	1470	290	46	413	236	130	19	.70
21	.96	3390	40	94	2610	1290	42	150	130	70	12	.55
22	.86	1770	200	84	1200	586	39	67	86	60	48	.55
23	1.2	999	500	76	550	293	35	107	63	40	23	.55
24	6.0	604	1000	70	300	207	34	83	47	5.0	14	.55
25	15	319	1200	66	170	159	32	50	36	.50	223	.55
26	11	248	600	64	140	130	29	37	29	.30	72	.55
27	7.6	582	150	60	130	109	24	32	22	.27	34	.55
28	29	283	350	58	110	107	17	26	21	.79	19	.55
29	57	167	300	54	---	187	25	21	39	.65	13	.55
30	43	122	150	52	---	801	22	15	44	39	7.9	.55
31	27	---	110	48	---	2090	---	12	---	105	3.8	---
TOTAL	337.66	20213	5314	7476	47481	13914	7695	1351.7	4843.5	3007.51	1088.4	240.47
MEAN	10.9	674	171	241	1696	449	256	43.6	161	97.0	35.1	8.02
MAX	57	5810	1200	1500	8800	2440	2130	413	1800	635	223	120
MIN	.19	15	11	48	45	51	17	2.1	6.5	.27	1.0	.55
CFSM	.09	5.43	1.38	1.94	13.7	3.62	2.07	.35	1.30	.78	.28	.06
IN.	.10	6.06	1.59	2.24	14.24	4.17	2.31	.41	1.45	.90	.33	.07

CAL YR 1988 TOTAL 67251.34 MEAN 184 MAX 5810 MIN .00 CFSM 1.48 IN. 20.18
WTR YR 1989 TOTAL 112962.24 MEAN 309 MAX 8800 MIN .19 CFSM 2.50 IN. 33.89

03320000 GREEN RIVER AT LOCK 2, AT CALHOUN, KY

LOCATION.--Lat 37°32'02", long 87°15'50", McLean County, Hydrologic Unit 05110005, 870 ft upstream from lock and dam 2, on right bank 0.2 mi downstream from bridge on State Highway 81 at Calhoun, 0.2 mi upstream from Long Falls Creek, and at mile 63.3.

DRAINAGE AREA.--7,566 mi^2, of which about 1,540 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--March 1930 to current year. Prior to October 1958, published as "at Livermore."

REVISED RECORDS.--WSP 1385: 1939. WDR KY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 353.95 ft above National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder at Livermore, 8.0 mi upstream at datum 360.11 ft National Geodetic Vertical Datum of 1929. See WDR KY-88-1 for history of changes prior to Sept. 30, 1958.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by upstream lakes on Green, Barren, Nolin, and Rough River beginning October 1959. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--59 years, 11,230 ft^3/s, 20.16 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 208,000 ft^3/s, Jan. 27, 1937; maximum gage height, 42.4 ft, Jan. 30, 1937, at site 0.2 mi upstream at datum 1.35 ft higher; minimum discharge, 280 ft^3/s, Oct. 5-9, 23-27, 1930, Feb. 2-4, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1937 is maximum known since 1898.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 80,000 ft^3/s, Feb. 21, maximum gage height, 33.37 ft, Feb. 24, minimum daily discharge, 1,380 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5870	3980	25700	35000	21900	56100	36700	6840	5590	8460	4080	4430
2	4340	3860	23700	23700	19900	51700	36600	6600	5390	13600	3910	4100
3	3050	3810	22300	16500	31700	48100	37300	6610	5160	24100	3820	3700
4	2480	3860	21000	12900	41300	44800	39000	6560	5400	31500	3830	3610
5	2200	6050	20100	10500	43800	42300	40600	6480	5460	33800	3630	3320
6	2080	8350	19600	12400	44600	43300	41300	6530	6110	28500	5030	3070
7	2060	8160	19200	14600	43700	45400	41800	6580	6280	22400	7600	2830
8	2050	6790	18800	20700	41400	47000	41200	6660	6130	17600	6330	2590
9	1850	5910	18500	26800	37000	48200	39100	6730	6060	15400	5210	2360
10	1680	5790	17800	29700	33400	49100	36500	6970	6550	13500	4320	1990
11	1510	8550	16500	29800	30400	49100	34100	7540	7780	12600	3540	1660
12	1530	9900	14200	31900	25800	47900	32800	8030	7930	13000	3060	1490
13	1620	9450	11100	38700	29500	44700	32000	8250	12800	14100	2740	1400
14	1690	8020	9540	42200	45800	39900	30600	8770	24000	13400	2350	1380
15	1700	6590	8900	46600	51200	35300	28000	9810	28700	12700	2000	1430
16	1770	5650	8520	48300	58200	32500	24200	10800	29200	11000	1750	1500
17	1810	5710	8180	49800	64400	32600	22100	11100	31800	9500	1620	1760
18	1950	5490	7910	50900	70100	33200	21400	9980	32500	8230	1490	2900
19	2310	17800	7460	51500	75500	33100	20800	7640	27400	7490	1560	4420
20	2830	40600	7180	50000	78500	33600	20300	8100	22200	7190	1670	4420
21	3080	44800	6980	45000	79300	35500	19900	14900	22700	6900	1800	3890
22	3120	46500	8370	35000	77800	36800	19400	13600	24700	6450	1770	4020
23	3240	47900	13200	32000	75600	38000	18600	12100	23100	6230	1820	4170
24	3200	48500	25000	30000	72600	38500	17400	12200	19000	6150	2340	4760
25	3230	44000	35100	28000	70500	37600	15400	12300	17200	5920	3040	6980
26	3210	34000	38600	25900	68500	35900	12700	11700	15900	5640	4270	7580
27	3240	35000	41200	26600	65300	34200	10300	10400	14200	5330	5630	7160
28	3480	31000	45300	25700	61000	33100	8510	8710	12800	5100	6070	7280
29	3990	29000	47200	25300	---	33200	7420	7490	9910	4970	5840	7290
30	4160	28000	46000	24600	---	34500	7000	6510	8610	4620	5350	7190
31	4120	---	40000	23600	---	36400	---	5890	---	4650	4780	---
TOTAL	84450	563020	653140	964200	1458700	1251600	793030	272380	450560	380030	112250	114690
MEAN	2724	18770	21070	31100	52100	40370	26430	8786	15020	12260	3621	3823
MAX	5870	48500	47200	51500	79300	56100	41800	14900	32500	33800	7600	7580
MIN	1510	3810	6980	10500	19900	32500	7000	5890	5160	4620	1490	1380

CAL YR 1988 TOTAL 3502941 MEAN 9571 MAX 48500 MIN 291
WTR YR 1989 TOTAL 7098050 MEAN 19450 MAX 79300 MIN 1380

03320500 POND RIVER NEAR APEX, KY

LOCATION.--Lat 37°07'20", long 87°19'10", Muhlenberg County, Hydrologic Unit 05110006, on downstream side of right pier of bridge on State Highway 189, 1.1 mi downstream from Coal Creek, 2.1 mi northeast of Apex, 5.7 mi upstream from West Fork, and at mile 62.8.

DRAINAGE AREA.--194 mi^2.

PERIOD OF RECORD.--August 1940 to current year. October 1953 to September 1971, published as "East Fork Pond River near Apex."

REVISED RECORDS.--WSP 1083: 1942-46. WSP 1555: 1945-46(P), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 384.53 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 21, 1942, nonrecording gage at same site. Prior to Oct. 1, 1974, at datum 6.11 ft higher.

REMARKS.--Estimated daily discharges: Nov. 9 to Dec. 25, Jan. 27 to Feb. 2, Apr. 29 to May 4 and May 7 to June 23. Records fair except those for periods of estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 277 ft^3/s, 19.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,700 ft^3/s, May 7, 1984, gage height, 22.83 ft; maximum gage height, 26.81 ft, present datum, Nov. 19, 1957; no flow at times during most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of 19.6 ft, datum then in use, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 24	Unknown	e4,000	Unknown	Feb. 21	1000	2,900	16.89
Dec. 28	0900	5,190	16.95	Mar. 5	2200	3,000	17.00
Feb. 3	1900	10,400	18.80	Apr. 4	0600	3,100	17.10
Feb. 15	1500	*32,300	*22.60	July 2	2200	4,740	18.43

e Estimated
Minimum daily discharge, 2.2 ft^3/s, Oct. 19-23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	7.0	33	724	280	248	1180	56	11	59	236	9.6
2	20	5.8	30	547	250	194	853	48	14	2380	154	12
3	31	5.3	28	421	8540	162	807	41	20	4440	62	17
4	18	45	26	283	7570	139	2780	35	18	2280	36	15
5	11	452	25	186	2680	1440	1950	34	14	1340	24	11
6	7.3	324	23	416	1650	2710	1230	42	13	874	49	9.7
7	6.1	154	22	518	1010	1710	788	50	11	621	198	8.4
8	5.1	63	21	710	590	1090	593	38	10	465	120	7.7
9	4.3	15	21	659	441	710	497	40	9.6	322	62	7.0
10	3.8	150	20	498	312	543	390	48	9.0	191	36	6.6
11	3.6	70	19	382	211	439	286	60	8.8	117	25	6.2
12	3.5	35	18	991	158	328	216	45	500	85	20	5.7
13	3.4	25	18	1300	3730	235	156	40	580	63	17	5.3
14	3.4	19	17	796	23300	183	115	30	350	51	14	5.0
15	3.0	16	17	571	28400	150	129	25	200	45	12	5.0
16	2.3	15	17	443	13300	124	106	22	100	39	11	5.2
17	2.3	14	16	426	5560	107	99	19	150	34	19	5.3
18	2.3	200	16	453	2090	104	81	17	250	32	17	5.2
19	2.2	2000	100	381	1470	127	69	16	180	27	11	4.9
20	2.2	1500	200	304	1540	189	63	18	140	23	11	4.6
21	2.2	150	100	221	2750	708	56	15	110	21	23	4.3
22	2.2	40	150	178	1890	518	52	15	70	20	18	4.3
23	2.2	25	600	163	1280	446	47	15	56	19	14	5.1
24	3.2	20	3000	163	807	340	44	15	39	17	13	5.2
25	4.0	60	1700	174	603	244	41	16	30	15	11	5.0
26	4.1	300	897	231	507	187	38	15	25	14	12	4.8
27	4.1	160	573	300	420	152	35	14	30	12	17	4.4
28	5.1	100	3600	500	334	142	36	14	93	10	14	4.2
29	8.8	60	2590	450	---	228	60	14	97	9.3	11	4.1
30	9.5	40	1870	370	---	692	58	13	60	8.1	10	4.3
31	8.6	---	1160	330	---	1470	---	12	---	9.0	10	---
TOTAL	194.2	6070.1	16927	14089	111673	16059	12855	882	3198.4	13642.4	1287	202.1
MEAN	6.26	202	546	454	3988	518	428	28.5	107	440	41.5	6.74
MAX	31	2000	3600	1300	28400	2710	2780	60	580	4440	236	17
MIN	2.2	5.3	16	163	158	104	35	12	8.8	8.1	10	4.1
CFSM	.03	1.04	2.81	2.34	20.6	2.67	2.21	.15	.55	2.27	.21	.03
IN.	.04	1.16	3.25	2.70	21.41	3.08	2.46	.17	.61	2.62	.25	.04

CAL YR 1988 TOTAL 93022.46 MEAN 254 MAX 13300 MIN .59 CFSM 1.31 IN. 17.84
WTR YR 1989 TOTAL 187079.2 MEAN 540 MAX 28400 MIN 2.2 CFSM 2.78 IN. 37.79

03322000 OHIO RIVER AT EVANSVILLE, IN

LOCATION.--Lat 37°58'20", long 87°34'35", Vanderburgh County, Hydrologic Unit 05140202, on right bank at Riverside Drive and Court Street, at Evansville, 0.6 mi upstream from Pigeon Creek, and at mile 792.3.

DRAINAGE AREA.--107,000 mi^2, approximately.

PERIOD OF RECORD.--December 1936 to current year (fragmentary prior to October 1940 and after September 1974). Gage-height records collected at same site since 1873 are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 328.64 ft above National Geodetic Vertical Datum of 1929 or 329.18 ft, Ohio River datum. Prior to Feb. 20, 1963, and after Sept. 23, 1963, water-stage recorder at same site and datum. Feb. 20, 1963 to Sept. 23, 1963, nonrecording gage 0.6 mi downstream at same datum. Prior to February 1975 auxiliary nonrecording gage at lock and dam 48, 17.3 mi downstream. From February 1975 to May 23, 1985, auxiliary nonrecording gage at Newburgh lock and dam, 16.3 mi upstream. Since May 23, 1985 water-stage recorder at same site.

REMARKS.--No estimated daily discharges. Records good. Discharge values published are days with mean values 100,000 ft^3/s and above. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--34 years (Water years 1941-74), 133,300 ft^3/s, 16.92 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410,000 ft^3/s, Jan. 29, 1937; maximum gage height, 53.75 ft, Jan. 31, 1937; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 674,000 ft^3/s, Feb. 21; maximum gage height, 43.76 ft, Feb. 22; minimum discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	223000	112000	377000	326000	302000	236000	194000	---	---
2	---	---	---	196000	114000	302000	373000	330000	202000	201000	---	---
3	---	---	---	169000	156000	254000	410000	339000	167000	209000	---	---
4	---	---	---	146000	208000	218000	467000	330000	148000	180000	---	---
5	---	---	---	129000	246000	190000	535000	315000	141000	155000	---	---
6	---	---	---	133000	287000	211000	568000	309000	136000	139000	---	---
7	---	---	---	143000	303000	271000	565000	303000	137000	126000	---	---
8	---	---	---	157000	293000	346000	539000	288000	139000	120000	---	---
9	---	---	---	194000	243000	420000	502000	286000	140000	119000	---	---
10	---	---	---	225000	176000	481000	463000	321000	145000	117000	---	---
11	---	---	---	221000	136000	520000	420000	361000	152000	115000	---	---
12	---	---	---	230000	110000	532000	382000	375000	146000	113000	---	---
13	---	---	---	241000	101000	489000	348000	380000	134000	112000	---	---
14	---	---	---	256000	188000	393000	309000	389000	138000	---	---	---
15	---	---	---	288000	296000	311000	268000	400000	143000	103000	---	---
16	---	---	---	327000	410000	261000	230000	406000	164000	---	---	---
17	---	---	---	376000	499000	227000	190000	403000	195000	---	---	102000
18	---	---	---	391000	567000	193000	162000	389000	237000	---	---	132000
19	---	---	---	385000	616000	167000	140000	370000	297000	---	---	158000
20	---	113000	---	347000	649000	153000	144000	360000	354000	101000	---	151000
21	---	172000	---	286000	674000	177000	158000	341000	386000	---	---	108000
22	---	224000	---	229000	663000	235000	166000	311000	388000	---	---	---
23	---	262000	---	120000	630000	275000	164000	271000	355000	---	---	---
24	---	280000	---	110000	593000	308000	149000	232000	320000	---	100000	---
25	---	256000	151000	100000	573000	338000	130000	228000	304000	---	119000	135000
26	---	202000	213000	---	560000	343000	111000	236000	311000	---	134000	176000
27	---	157000	255000	---	535000	322000	110000	237000	309000	---	154000	185000
28	---	130000	296000	---	475000	283000	150000	239000	281000	---	150000	158000
29	---	109000	320000	---	---	251000	201000	252000	242000	---	115000	124000
30	---	108000	303000	102000	---	238000	251000	263000	202000	---	---	105000
31	---	---	260000	111000	---	272000	---	256000	---	---	---	---
TOTAL	---	---	---	---	10413000	9358000	8931000	9822000	6649000	---	---	---
MEAN	---	---	---	---	371900	301900	297700	316800	221600	---	---	---
MAX	---	---	---	---	674000	532000	568000	406000	388000	---	---	---
MIN	---	---	---	---	101000	153000	110000	228000	134000	---	---	---

03322360 BEAVERDAM CREEK NEAR CORYDON, KY

LOCATION.--Lat 37°42'14", long 87°41'52", Henderson County, Hydrologic Unit 05140202, on left upstream wingwall of bridge on State Highway 145, 2.8 mi southeast of Corydon, and at mile 3.3.

DRAINAGE AREA.--14.3 mi^2.

PERIOD OF RECORD.--July 1972 to September 1982, October 1983 to February 1987, February 1988 to current year.

GAGE.--Water-stage recorder. Elevation is 360 ft from topographic map.

REMARKS.--Estimated daily discharges: Mar. 21-23. Records fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--14 years (Water years 1973-82, 1984-86, 1989), 15.8 ft^3/s, 15.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,360 ft^3/s, Apr. 29, 1983, gage height, 16.4 ft, from floodmark; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0045	1,490	12.81	Mar. 5	2115	2,110	14.22
Jan. 7	2200	2,090	14.18	Mar. 30	2330	1,950	13.89
Feb. 13	1545	2,130	14.26	July 2	1200	*2,380	*14.76
Feb. 15	0245	1,230	12.10				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.27	28	3.5	2.9	14	.60	.13	1.9	.00	34
2	.00	.00	.22	4.9	182	3.2	9.1	.50	.09	420	.00	1.5
3	.00	.00	.21	3.9	256	3.3	58	.47	.08	35	.00	.38
4	.00	20	.15	2.2	13	3.8	107	.55	.10	7.5	.00	.11
5	.00	6.0	.09	48	6.1	634	9.7	1.0	2.7	3.7	.00	.02
6	.00	.82	.10	76	3.5	138	7.1	1.0	.54	2.3	12	.01
7	.00	.35	.09	200	2.9	16	7.6	.68	.21	1.7	.52	.00
8	.00	.17	.05	41	2.4	10	6.9	.54	.12	1.3	.05	.00
9	.00	.06	.02	5.5	1.9	8.7	4.3	83	.08	1.0	.00	.00
10	.00	4.4	.01	3.8	2.0	7.8	3.7	2.7	.02	.83	.00	.00
11	.00	.89	.00	4.1	2.7	7.0	3.5	1.3	.00	.70	.00	.00
12	.00	.27	.00	37	2.5	5.5	3.2	.94	13	.63	.00	.00
13	.00	.10	.00	6.4	853	6.9	2.9	.69	8.6	.68	.00	.00
14	.00	.01	.00	159	141	6.4	2.8	.89	9.1	.49	.00	.00
15	.00	.00	.00	17	567	4.6	3.7	.66	1.4	.40	.00	.00
16	.00	3.6	.00	7.6	70	3.6	2.8	.42	.90	.38	1.5	.99
17	.00	.89	.00	5.6	14	3.8	2.4	.29	.57	.34	1.4	.45
18	.00	2.1	.00	4.8	9.6	3.6	2.5	.20	.42	.30	.43	.12
19	.00	219	.00	3.9	9.1	3.2	3.1	9.0	.23	4.4	.12	.01
20	.00	181	.01	3.4	80	29	2.2	4.0	.30	1.3	.00	.02
21	.00	1.4	.01	2.8	63	18	2.0	.98	.12	.55	.00	.00
22	.00	.66	.01	2.8	28	9.0	1.9	.70	.10	.27	.00	.00
23	.00	.39	.01	2.9	5.0	6.0	2.0	.99	.05	.20	14	.00
24	.00	.29	.08	2.9	4.1	4.7	1.8	.52	.07	.19	14	.00
25	.00	.22	.34	5.7	5.0	4.2	1.5	.72	.04	.06	47	.00
26	.00	9.9	.20	7.1	5.6	3.9	1.3	2.6	.01	.00	1.3	.00
27	.00	3.2	1.1	4.9	4.3	3.7	1.1	.58	80	.00	.77	.00
28	.00	1.0	161	4.0	3.5	17	.98	.23	6.9	.00	.24	.00
29	.00	.61	3.5	7.4	---	55	.91	2.1	1.1	.00	.06	.00
30	.00	.38	2.9	5.5	---	187	.71	.58	.53	.00	.01	.00
31	.00	---	3.8	4.2	---	193	---	.25	---	.00	.00	---
TOTAL	0.00	457.71	174.17	712.3	2340.7	1402.8	270.70	119.68	127.51	486.12	93.40	37.61
MEAN	.00	15.3	5.62	23.0	83.6	45.3	9.02	3.86	4.25	15.7	3.01	1.25
MAX	.00	219	161	200	853	634	107	83	80	420	47	34
MIN	.00	.00	.00	2.2	1.9	2.9	.71	.20	.00	.00	.00	.00
CFSM	.00	1.07	.39	1.61	5.85	3.16	.63	.27	.30	1.10	.21	.09
IN.	.00	1.19	.45	1.85	6.09	3.65	.70	.31	.33	1.26	.24	.10

WTR YR 1989 TOTAL 6222.70 MEAN 17.0 MAX 853 MIN .00 CFSM 1.19 IN. 16.19

03322420 OHIO RIVER AT UNIONTOWN, KY

LOCATION.--Lat 37°48'00", long 87°59'00", Union County, Hydrologic Unit 05140202, at Uniontown Dam, 2.1 mi upstream from Wabash River, 3.0 mi downstream from Lost Creek, and at mile 846.0.

DRAINAGE AREA.--108,000 mi^2.

PERIOD OF RECORD.--October 1984 to current year.

GAGE.--Gage opening and water-stage recorders. Datum of lead water gage 0.4 mi upstream is 330.052 ft Ohio River datum. Datum of tailwater gage 0.4 mi downstream is 311.969.

REMARKS.--Estimated daily discharges: Mar. 8-10, Apr. 9-13, 1988. Records for water year 1988 fair. Estimated daily discharge: Mar. 1-5, 15-18, Apr. 6-18, 1989. Records for water year 1989 fair.

AVERAGE DISCHARGE --5 years, 127,800 ft^3/s, 16.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 583,000 ft^3/s, Feb. 22, 1989; maximum headwater gage-height, 45.40 ft, Feb. 24, 1989; maximum tailwater gage-height, 45.12 ft, Feb. 24, 1989, minimum daily discharge, 4,780 ft^3/s, June 26, 1988.

EXTREMES FOR WATER YEAR 1988.--Maximum daily discharge, 394,000 ft^3/s, Feb. 9; maximum headwater gage-height, 38.89 ft, Feb. 9; maximum tailwater gage-height, 38.52 ft, Feb. 9, minimum daily discharge, 4,780 ft^3/s, June 26.

Water year 1989: Maximum daily discharge, 583,000 ft^3/s, Feb. 22; maximum headwater gage-height, 45.40 ft, Feb. 24; maximum tailwater gage-height, 45.12 ft, Feb. 24, minimum daily discharge, 8,800 ft^3/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33400	24600	64500	241000	106000	105000	144000	69300	71000	11600	18000	17400
2	26000	37100	89600	182000	152000	90400	139000	52600	36100	11500	16000	17300
3	37500	39900	101000	167000	232000	85100	136000	58500	35900	10200	16000	19200
4	37800	31300	106000	149000	232000	104000	131000	60800	29100	10100	16000	28700
5	41400	31300	107000	139000	286000	143000	138000	71800	27900	9280	19800	29000
6	42800	28900	90400	134000	326000	188000	170000	67100	22900	8780	30300	32300
7	31800	24200	81600	110000	352000	254000	181000	65800	22700	8810	37400	40100
8	32600	20800	78700	61900	377000	280000	243000	76600	22700	8830	29500	40200
9	35700	32700	72800	46800	394000	290000	260000	88800	27000	8850	13500	37700
10	35600	33800	62900	65600	386000	260000	270000	108000	23300	8830	11700	12100
11	30500	34300	65000	58000	346000	212000	270000	119000	15200	8890	11800	9280
12	46100	30800	65900	43100	280000	165000	260000	121000	25600	8860	15700	11600
13	50800	28800	73900	45400	205000	150000	240000	118000	20400	8880	18900	13200
14	25700	40300	81000	55200	145000	138000	218000	94800	15300	8910	11700	26000
15	42100	50200	75000	46200	134000	133000	167000	81200	14500	9060	11200	40900
16	42900	52500	73800	43900	136000	133000	154000	85100	13200	8920	8820	37900
17	30900	53600	73400	47200	137000	137000	126000	72000	10100	8980	8790	15500
18	35700	44900	76400	40500	130000	134000	101000	52700	17500	9060	10200	14300
19	34400	38400	85300	55300	132000	117000	87800	57000	17400	9890	16100	24200
20	17900	39000	85600	160000	134000	103000	79400	54100	17300	29200	20300	34100
21	28700	43900	84500	212000	142000	101000	80300	57300	15400	82400	17900	53100
22	21100	42900	61800	234000	146000	98100	94000	78200	11500	91700	15700	39100
23	23900	48800	77100	252000	149000	95800	96400	87700	11500	70600	14600	32000
24	28700	50200	90400	269000	152000	86000	93900	91300	10600	32800	14600	30000
25	21700	51100	106000	277000	151000	84600	96800	101000	5320	30700	15600	31200
26	29000	38200	141000	264000	144000	98600	99500	96800	4780	42800	17500	38200
27	23800	47100	174000	222000	143000	111000	87600	88800	11200	38400	17500	45100
28	22900	49200	190000	159000	137000	114000	81400	83600	11700	35300	17500	56000
29	23000	50900	262000	127000	123000	127000	63500	92500	11700	32200	19200	57800
30	23000	58400	247000	99900	---	138000	75500	84600	11600	23500	20400	45200
31	23000	---	255000	77700	---	145000	---	74400	---	21900	18600	---
TOTAL	980400	1198100	3298600	4084700	5909000	4420600	4384100	2510400	590400	709730	530810	928680
MEAN	31630	39940	106400	131800	203800	142600	146100	80980	19680	22890	17120	30960
MAX	50800	58400	262000	277000	394000	290000	270000	121000	71000	91700	37400	57800
MIN	17900	20800	61800	40500	106000	84600	63500	52600	4780	8780	8790	9280

CAL YR 1987 TOTAL 36727580 MEAN 100600 MAX 430000 MIN 4860
WTR YR 1988 TOTAL 29545520 MEAN 80730 MAX 394000 MIN 4780

03322420 OHIO RIVER AT UNIONTOWN, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25500	16400	114000	258000	119000	330000	294000	306000	243000	187000	82200	71600
2	17100	37400	91500	197000	120000	290000	344000	264000	220000	198000	66500	79200
3	17500	30400	89800	181000	163000	230000	390000	276000	165000	203000	53000	72000
4	17500	24800	95100	159000	196000	190000	446000	280000	151000	191000	37100	52200
5	16500	37900	72300	139000	219000	185000	511000	281000	145000	176000	44200	32400
6	14600	44800	67400	141000	240000	192000	530000	275000	141000	163000	57700	30400
7	18900	58300	60800	152000	256000	240000	510000	270000	138000	148000	74400	30200
8	15000	78900	60200	163000	262000	279000	490000	263000	141000	141000	92300	30300
9	14800	83800	63700	188000	245000	333000	460000	254000	142000	141000	86400	30000
10	12100	64000	62200	209000	189000	359000	430000	256000	147000	142000	72400	57500
11	8800	66000	62900	231000	156000	398000	400000	285000	152000	127000	31500	65000
12	8810	77300	59900	239000	125000	404000	360000	305000	151000	120000	43500	9390
13	12200	75200	26200	241000	119000	414000	310000	300000	141000	118000	27100	39800
14	20300	67500	33200	248000	208000	403000	280000	334000	147000	105000	25600	40900
15	20100	60300	34100	266000	270000	330000	240000	347000	155000	103000	25400	33400
16	20100	63800	25400	287000	334000	260000	210000	356000	170000	106000	18900	67200
17	24100	74800	25700	310000	384000	220000	185000	355000	191000	82500	23100	96500
18	29000	71000	31900	329000	441000	190000	160000	342000	240000	56400	33100	117000
19	29100	85300	34000	340000	479000	171000	147000	323000	275000	60900	36200	149000
20	12700	141000	33700	340000	538000	164000	144000	310000	261000	87500	45900	153000
21	14100	191000	34100	321000	572000	178000	155000	288000	306000	93200	52800	117000
22	32900	217000	45400	285000	583000	268000	163000	268000	309000	74900	68600	85200
23	46200	296000	64600	222000	569000	228000	164000	243000	310000	89900	75000	73800
24	31300	297000	96000	149000	542000	239000	150000	229000	300000	94500	93700	79100
25	29800	255000	156000	129000	519000	252000	131000	295000	280000	60300	111000	123000
26	37600	241000	206000	108000	492000	267000	108000	327000	266000	66000	125000	158000
27	43000	176000	223000	102000	477000	282000	106000	310000	262000	62500	144000	172000
28	39000	152000	294000	104000	479000	271000	145000	307000	255000	51800	148000	164000
29	30800	130000	252000	107000	---	248000	186000	267000	239000	61500	122000	135000
30	23100	120000	261000	111000	---	238000	218000	241000	190000	79700	77600	107000
31	21100	---	249000	118000	---	258000	---	246000	---	82200	72400	---
TOTAL	703610	3333900	3025100	6374000	9296000	8311000	8367000	9003000	6233000	3472800	2066600	2471090
MEAN	22700	111100	97580	205600	332000	268100	278900	290400	207800	112000	66660	82370
MAX	46200	297000	294000	340000	583000	414000	530000	356000	310000	203000	148000	172000
MIN	8800	16400	25400	102000	119000	164000	106000	229000	138000	51800	18900	9390

CAL YR 1988 TOTAL 31131030 MEAN 85060 MAX 394000 MIN 4780
WTR YR 1989 TOTAL 62657100 MEAN 171700 MAX 583000 MIN 8800

TRADEWATER RIVER BASIN

03383000 TRADEWATER RIVER AT OLNEY, KY

LOCATION.--Lat 37°13'26", long 87°46'53", Caldwell County, Hydrologic Unit 05140205, on left bank at downstream side of bridge on State Highway 1220 at Olney, 0.9 mi upstream from Cave Creek, 5.4 mi downstream from Flynn Creek, 9.5 mi northeast of Princeton, and at mile 72.7.

DRAINAGE AREA.--255 mi^2, of which about 9 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--August 1940 to May 1984, March 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 362.80 ft above National Geodetic Vertical Datum of 1929. Prior to July 31, 1942, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: July 28-31. Records fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--47 years (Water years 1941-83, 1986-89), 337 ft^3/s, 17.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,600 ft^3/s, Feb. 16, 1989, gage height, 18.85 ft; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of 19.27 ft, from floodmarks, discharge, 17,000 ft^3/s, by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*)

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 22	1500	3,660	15.62	Mar. 8	2000	2,080	13.96
Dec. 29	1400	2,080	14.26	Apr. 5	0200	2,440	14.38
Feb. 6	1800	2,700	14.87	July 3	1900	4,580	15.80
Feb. 16	0200	*14,600	*18.85				

Minimum daily discharge, 2.2 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	5.2	815	1910	281	458	1770	33	15	662	11	12
2	3.4	5.2	413	1650	239	372	1860	31	21	1830	13	17
3	2.5	5.7	257	1280	1330	325	1880	28	31	4280	60	21
4	3.2	9.7	198	841	2310	298	2100	25	26	4520	49	13
5	3.6	119	152	482	2450	718	2350	25	21	4460	30	11
6	5.9	248	124	890	2650	1560	2090	48	17	4120	23	9.3
7	7.7	241	104	1290	2550	1950	2020	57	15	3450	18	8.1
8	7.5	107	89	1400	2170	2040	1800	46	14	2510	30	7.4
9	6.3	45	77	1490	1670	2050	1360	48	13	1580	53	6.9
10	4.5	28	67	1340	1110	1730	909	77	11	908	38	6.9
11	3.6	22	60	1030	576	1260	544	86	11	374	26	6.7
12	2.9	20	52	921	353	752	391	73	132	148	18	6.6
13	2.7	34	47	1300	1120	456	310	59	645	86	14	6.6
14	2.8	30	45	1440	6420	344	254	45	926	59	11	6.9
15	2.7	20	44	1790	11200	285	230	36	1060	46	9.4	7.2
16	2.8	16	40	1980	14000	230	217	31	927	36	8.7	7.2
17	3.1	14	37	1930	11400	187	195	28	594	30	8.4	7.2
18	3.0	18	34	1890	8290	156	161	25	323	25	8.0	6.9
19	2.5	1020	33	1630	5870	133	140	23	176	24	7.7	6.9
20	2.2	2460	33	1200	4420	178	122	23	118	22	10	6.9
21	2.4	3300	33	669	3920	711	106	21	108	20	11	6.7
22	2.6	3590	35	354	3430	1070	90	20	93	18	11	6.6
23	3.5	3510	42	241	2950	1070	79	20	74	17	13	6.6
24	4.0	3050	317	203	2610	829	71	20	68	15	11	6.6
25	4.3	2490	823	168	2170	530	63	21	62	14	11	6.5
26	5.1	1940	1000	155	1590	378	56	20	48	12	17	6.2
27	5.7	1630	1010	283	1090	292	50	19	133	11	128	6.2
28	7.5	1480	1470	511	655	243	45	18	637	10	41	6.2
29	6.7	1380	2020	451	---	248	41	18	1170	9.6	22	6.0
30	5.8	1250	1990	380	---	632	37	17	964	9.0	18	6.2
31	5.3	---	1960	328	---	1400	---	16	---	9.8	15	---
TOTAL	128.5	28087.8	13421	31427	98824	22885	21341	1057	8453	29315.4	744.2	245.5
MEAN	4.15	936	433	1014	3529	738	711	34.1	282	946	24.0	8.18
MAX	7.7	3590	2020	1980	14000	2050	2350	86	1170	4520	128	21
MIN	2.2	5.2	33	155	239	133	37	16	11	9.0	7.7	6.0
CFSM	.02	3.67	1.70	3.98	13.8	2.90	2.79	.13	1.10	3.71	.09	.03
IN.	.02	4.10	1.96	4.58	14.42	3.34	3.11	.15	1.23	4.28	.11	.04

CAL YR 1988 TOTAL 125766.11 MEAN 344 MAX 3760 MIN .12 CFSM 1.35 IN. 18.35
WTR YR 1989 TOTAL 255929.4 MEAN 701 MAX 14000 MIN 2.2 CFSM 2.75 IN. 37.34

03400500 POOR FORK AT CUMBERLAND, KY

LOCATION.--Lat 36°58'26", long 82°59'38", Harlan County, Hydrologic Unit 05130101, at left end upstream side of New York Avenue bridge at Cumberland, 250 ft upstream from Cloverlick Creek, 0.6 mi downstream from Looney Creek, and at mile 718.8.

DRAINAGE AREA.--82.3 mi^2.

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 923: 1940(M). WSP 1336: 1949-51, 1953(P). WSP 1506: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,410.15 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, at same site and datum 5.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 22-Dec. 14. Records good except for estimated discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 141 ft^3/s, 23.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft^3/s, Jan. 29, 1957, gage height, 16.50 ft, present datum, from rating curve extended above 3,500 ft^3/s on basis of slope-area measurement of peak flow; no flow for part of Oct. 28, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1927 reached a stage of about 15.2 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 21	1500	1,760	7.03	June 15	2100	2,330	7.72
May 5	2200	2,360	7.76	Aug. 30	0600	*2,700	*8.12

Minimum daily discharge, 7.8 ft^3/s, Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	65	111	60	169	245	558	84	86	156	152
2	16	14	55	115	57	159	236	893	83	70	132	122
3	16	13	48	110	131	156	228	460	77	66	90	92
4	16	13	43	96	349	152	328	304	72	70	69	77
5	14	83	35	78	251	168	399	1020	83	82	61	66
6	13	111	31	163	219	1160	315	1560	428	154	143	60
7	11	62	35	171	213	601	264	868	812	186	117	57
8	11	42	38	209	187	351	255	551	343	148	83	53
9	11	34	28	208	154	259	252	427	608	113	65	49
10	10	34	23	173	128	215	228	411	522	82	55	45
11	10	36	18	143	121	185	203	392	294	68	49	45
12	10	34	17	506	109	163	182	336	273	65	45	81
13	10	34	22	1040	97	155	161	278	484	68	42	62
14	9.0	33	30	540	118	157	144	229	432	61	40	104
15	8.4	31	28	863	171	148	147	215	1600	55	38	317
16	7.8	46	27	904	229	137	142	193	1700	50	38	1040
17	9.9	128	25	587	321	125	130	178	1600	46	41	363
18	12	62	24	242	295	145	125	157	649	43	62	215
19	9.6	81	25	197	240	173	120	141	368	40	57	159
20	10	214	26	163	266	177	107	179	267	42	46	122
21	15	197	50	137	1250	351	98	158	212	43	39	99
22	18	100	121	121	940	404	88	143	179	40	37	721
23	21	77	142	104	498	302	83	183	169	38	57	785
24	22	65	462	91	317	274	83	167	145	35	134	475
25	18	58	556	84	242	243	79	147	123	33	120	317
26	16	52	253	76	217	213	87	134	109	33	110	372
27	15	78	167	70	203	188	479	162	103	97	76	330
28	15	92	141	62	186	167	290	150	100	127	62	253
29	15	98	125	59	---	150	274	133	85	73	54	204
30	14	80	107	66	---	151	300	115	71	85	991	207
31	16	---	100	67	---	208	---	96	---	131	247	---
TOTAL	416.7	2018	2867	7556	7569	7606	6072	10938	12075	2340	3356	7044
MEAN	13.4	67.3	92.5	244	270	245	202	353	402	75.5	108	235
MAX	22	214	556	1040	1250	1160	479	1560	1700	186	991	1040
MIN	7.8	13	17	59	57	125	79	96	71	33	37	45
CFSM	.16	.82	1.12	2.96	3.28	2.98	2.46	4.29	4.89	.92	1.32	2.85
IN.	.19	.91	1.30	3.42	3.42	3.44	2.74	4.94	5.46	1.06	1.52	3.18

CAL YR 1988 TOTAL 27098.2 MEAN 74.0 MAX 1030 MIN 5.1 CFSM .90 IN. 12.25
WTR YR 1989 TOTAL 69857.7 MEAN 191 MAX 1700 MIN 7.8 CFSM 2.33 IN. 31.58

03400785 MARTINS FORK ABOVE SMITH, KY

LOCATION.--Lat 36°43'34", long 83°17'17", Harlan County, Hydrologic Unit 05130101, on right bank 50 ft downstream from private bridge off State Highway 987, 0.1 mi west of Sampson post office, and 1.4 mi southwest of Smith.

DRAINAGE AREA.--23.8 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1351.486 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: June 15 to July 3 and Sept. 15-19. Water-discharge records good except for periods of estimated daily record, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft^3/s, Jan. 20, 1988, gage height, 7.04 ft; minimum discharge, 0.24 ft^3/s, Aug. 7-10, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft^3/s, June 15, gage height, 6.60 ft; minimum daily, 3.3 ft^3/s, Oct. 12-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	8.8	38	71	17	36	100	152	30	32	112	89
2	6.3	8.8	28	81	16	33	82	180	28	25	105	80
3	6.2	8.1	23	73	21	32	84	106	25	22	60	55
4	5.5	8.5	19	54	25	31	185	77	22	26	37	41
5	4.9	150	16	43	28	29	233	467	29	22	23	33
6	4.0	181	14	111	43	293	145	453	98	19	19	30
7	3.9	86	13	141	59	240	107	220	159	21	16	29
8	3.9	49	11	185	55	126	148	141	85	19	11	24
9	3.8	32	11	167	43	85	180	120	170	16	8.3	22
10	3.7	39	9.7	106	33	67	124	125	166	13	6.6	21
11	3.6	62	9.6	79	33	54	92	106	90	11	5.9	24
12	3.3	46	7.4	527	28	45	72	85	86	14	4.9	25
13	3.3	37	8.8	433	25	39	58	67	296	19	4.4	23
14	3.3	29	8.6	206	54	34	48	53	266	12	3.8	19
15	3.3	24	8.4	294	141	30	47	67	740	10	6.1	100
16	3.3	30	8.0	187	116	25	40	61	800	9.2	21	600
17	3.6	133	6.7	113	110	22	34	54	460	9.0	7.8	240
18	4.1	77	6.8	79	121	31	31	45	250	7.2	7.0	70
19	4.1	66	8.2	60	108	33	28	40	100	12	6.4	40
20	3.8	301	7.3	47	106	38	26	69	80	34	5.2	28
21	7.5	188	35	37	400	150	24	77	62	11	4.8	21
22	13	89	88	31	289	146	22	68	54	8.0	5.1	58
23	11	53	102	27	155	102	21	65	49	5.9	12	202
24	9.8	35	257	24	99	84	20	51	42	4.8	85	144
25	12	26	257	21	72	70	19	41	35	4.7	78	85
26	9.5	21	119	20	60	59	17	34	31	3.4	173	120
27	8.5	39	76	19	50	50	17	32	28	12	89	99
28	8.8	81	66	17	43	42	15	25	27	21	51	67
29	9.2	78	56	15	---	39	39	22	24	22	35	48
30	9.2	54	50	16	---	43	45	27	20	12	102	65
31	8.9	---	48	20	---	86	---	34	---	34	102	---
TOTAL	192.2	2040.2	1416.5	3304	2350	2194	2103	3164	4352	491.2	1207.3	2502
MEAN	6.20	68.0	45.7	107	83.9	70.8	70.1	102	145	15.8	38.9	83.4
MAX	13	301	257	527	400	293	233	467	800	34	173	600
MIN	3.3	8.1	6.7	15	16	22	15	22	20	3.4	3.8	19

CAL YR 1988 TOTAL 12851.36 MEAN 35.1 MAX 852 MIN .58
WTR YR 1989 TOTAL 25316.4 MEAN 69.4 MAX 800 MIN 3.3

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to current year.
pH: October 1979 to current year.
WATER TEMPERATURES: October 1979 to current year.
DISSOLVED OXYGEN: October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1979.

REMARKS.--Four submersible pumps are located on Martins Fork Dam, at four different elevations referenced to National Geodetic Vertical Datum. Pump 1 is located near the bottom of the lake, at an elevation of 1,272 ft; pump 2 is at an elevation of 1,285 ft; pump 3 at an elevation of 1,298 ft; and pump 4 at an elevation of 1,308 occasionally. Each lake level is sampled once every four hours, or six times per day. A maximum and minimum value for each parameter is determined for each level. The monitor was shut down from Oct. 1 to Apr. 9.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	149	149	137	133	106	102	133	125	153	149
2	---	---	110	106	137	133	106	102	133	129	153	149
3	---	---	153	149	137	133	110	106	133	129	153	149
4	---	---	153	145	137	133	110	106	133	129	153	149
5	---	---	149	145	137	133	110	106	137	129	157	153
6	---	---	149	110	141	137	110	106	137	133	157	149
7	---	---	145	106	137	137	110	106	141	133	157	149
8	---	---	141	137	141	137	114	110	137	137	153	149
9	---	---	149	129	137	137	114	110	141	137	157	149
10	---	---	133	125	141	137	114	110	141	137	153	149
11	141	129	137	125	141	137	114	114	141	137	157	153
12	153	137	141	125	141	137	118	110	141	137	157	153
13	161	145	141	129	145	141	118	114	145	137	157	153
14	153	149	141	133	145	141	118	114	141	141	157	153
15	153	145	141	125	149	141	122	114	145	137	157	153
16	153	145	129	125	145	141	118	114	145	141	157	157
17	157	145	129	125	145	86	122	114	145	141	161	157
18	149	145	129	125	98	90	118	118	149	141	161	153
19	153	149	129	125	98	86	122	118	145	141	161	157
20	157	149	133	125	106	86	122	118	149	141	161	153
21	---	---	133	125	94	86	122	118	149	145	161	153
22	---	---	133	129	102	98	122	122	149	145	165	157
23	---	---	133	129	106	98	125	122	149	141	161	153
24	---	---	133	129	106	102	125	122	149	145	161	157
25	149	145	137	129	106	102	125	122	149	145	161	157
26	153	145	133	129	106	102	129	122	149	145	161	157
27	153	149	137	129	106	102	129	125	149	145	161	157
28	153	149	137	133	106	98	129	125	153	145	161	157
29	157	149	137	133	106	102	129	125	153	149	161	157
30	153	149	137	133	106	102	133	125	149	145	161	157
31	---	---	137	133	---	---	129	125	153	149	---	---
MONTH	---	---	153	106	149	86	133	102	153	125	165	149

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	149	149	141	137	121	102	125	122	137	133
2	---	---	153	106	141	137	114	110	125	122	141	133
3	---	---	161	106	141	137	114	110	125	122	137	133
4	---	---	157	133	141	137	118	110	125	122	141	133
5	---	---	169	149	141	137	118	110	125	122	141	133
6	---	---	149	106	141	137	118	110	125	122	137	133
7	---	---	141	106	141	137	122	110	129	125	141	137
8	---	---	149	133	141	137	118	110	129	125	141	133
9	---	---	149	141	141	137	122	114	129	125	141	137
10	137	133	145	141	141	137	122	114	129	125	141	137
11	141	125	153	133	141	137	122	114	129	122	141	141
12	145	137	145	129	141	137	118	110	129	122	141	137
13	153	141	137	129	141	133	118	110	129	125	145	137
14	149	141	145	137	141	133	118	110	129	125	145	137
15	157	145	153	129	137	133	114	110	129	125	145	141
16	149	141	141	129	129	86	118	114	129	125	145	102
17	153	145	137	133	90	82	114	110	129	125	106	98
18	149	145	149	133	102	86	118	114	133	125	94	90
19	149	145	141	137	90	86	122	114	129	122	114	86
20	145	145	141	133	106	82	122	118	129	125	---	---
21	---	---	141	133	118	90	122	118	137	125	---	---
22	---	---	137	133	94	86	122	118	137	125	---	---
23	---	---	141	133	98	82	122	118	133	125	---	---
24	---	---	145	133	106	98	125	118	133	125	---	---
25	149	149	141	137	110	102	125	122	133	122	118	114
26	149	145	141	137	114	102	122	118	137	125	122	114
27	149	145	141	137	114	102	125	118	133	129	114	106
28	153	149	141	137	110	102	122	118	133	129	118	110
29	153	149	141	137	118	102	125	122	137	125	110	106
30	153	149	141	137	114	98	125	122	137	129	110	102
31	---	---	141	137	---	---	125	122	137	129	---	---
MONTH	---	---	169	106	141	82	125	102	137	122	---	---

PUMP NUMBER 3

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	153	149	169	145	129	125	173	165	180	161
2	---	---	110	106	169	153	133	129	188	165	173	161
3	---	---	173	106	169	157	141	133	184	169	180	161
4	---	---	169	165	173	157	137	133	180	149	173	153
5	---	---	173	161	173	149	149	141	169	145	173	153
6	---	---	169	129	169	165	149	133	180	165	169	161
7	---	---	141	125	169	161	145	133	169	161	165	161
8	---	---	141	137	173	149	145	129	165	157	169	153
9	---	---	145	141	173	133	153	129	165	161	169	149
10	141	129	149	141	165	133	161	149	165	161	169	157
11	141	137	153	141	180	141	184	145	161	161	169	161
12	145	141	149	133	169	114	161	133	161	157	169	165
13	145	141	153	149	188	122	169	145	165	161	173	165
14	145	141	153	149	180	106	165	145	161	157	173	161
15	149	141	149	141	137	98	169	149	165	157	173	165
16	145	141	153	141	98	86	169	161	165	157	137	129
17	145	141	153	149	106	94	176	165	165	157	137	133
18	149	145	153	149	125	102	165	137	165	157	165	137
19	149	145	157	149	129	118	165	153	165	161	157	129
20	149	145	157	145	129	122	161	133	165	149	153	133
21	---	---	153	149	137	125	153	141	165	153	169	137
22	---	---	161	137	133	129	157	145	161	149	173	133
23	---	---	165	149	137	133	161	149	165	157	161	129
24	---	---	165	161	141	133	169	149	165	157	157	149
25	149	141	165	153	141	137	165	161	161	149	153	118
26	153	145	169	129	145	129	169	161	161	149	141	122
27	153	145	169	141	141	126	169	149	169	153	[illegible]	149
28	153	145	165	145	133	114	169	153	165	161	157	133
29	153	145	161	145	141	118	173	161	165	161	149	137
30	153	149	180	145	133	125	173	161	169	161	145	129
31	---	---	169	149	---	---	173	165	176	169	---	---
MONTH	---	---	180	106	188	86	184	125	188	145	180	118

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	161	157	---	---	---	---
2	---	---	---	---	---	---	157	157	---	---	---	---
3	---	---	---	---	---	---	161	157	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	169	169
7	---	---	---	---	---	---	---	---	---	---	173	165
8	---	---	---	---	---	---	---	---	---	---	173	165
9	---	---	---	---	---	---	---	---	---	---	173	169
10	---	---	---	---	---	---	---	---	---	---	173	169
11	---	---	---	---	---	---	---	---	---	---	173	169
12	---	---	---	---	---	---	---	---	---	---	173	169
13	---	---	---	---	173	169	---	---	---	---	173	169
14	---	---	---	---	180	173	---	---	---	---	173	169
15	---	---	---	---	180	173	---	---	---	---	169	165
16	---	---	---	---	157	106	---	---	---	---	169	161
17	---	---	---	---	118	98	---	---	---	---	165	149
18	---	---	---	---	125	110	---	---	---	---	173	161
19	---	---	---	---	133	118	---	---	---	---	173	165
20	---	---	---	---	141	125	---	---	---	---	176	173
21	---	---	---	---	157	137	---	---	---	---	176	169
22	---	---	---	---	165	141	---	---	---	---	173	169
23	---	---	---	---	169	145	---	---	---	---	173	161
24	---	---	---	---	169	145	---	---	---	---	153	149
25	---	---	---	---	169	153	---	---	---	---	157	153
26	---	---	---	---	169	165	---	---	---	---	157	153
27	---	---	---	---	169	161	---	---	---	---	157	149
28	---	---	---	---	169	165	---	---	---	---	161	153
29	---	---	---	---	169	165	---	---	---	---	161	157
30	---	---	---	---	165	157	---	---	---	---	157	153
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 1

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.51	6.51	6.35	6.31	6.41	6.37	6.86	6.78	7.07	7.03
2	---	---	6.78	6.71	6.35	6.31	6.42	6.38	6.91	6.83	7.09	7.01
3	---	---	6.59	6.51	6.35	6.31	6.47	6.43	6.76	6.68	7.10	7.09
4	---	---	6.55	6.51	6.35	6.31	6.48	6.40	6.78	6.74	7.15	7.07
5	---	---	6.55	6.47	6.35	6.31	6.49	6.43	6.82	6.75	7.17	7.09
6	---	---	6.63	6.51	6.35	6.31	6.50	6.46	6.84	6.76	7.19	7.10
7	---	---	6.59	6.47	6.35	6.31	6.52	6.48	6.89	6.82	7.16	7.12
8	---	---	6.51	6.47	6.35	6.31	6.57	6.53	6.86	6.83	7.17	7.13
9	---	---	6.51	6.47	6.35	6.31	6.58	6.50	6.91	6.84	7.18	7.14
10	7.06	7.02	6.55	6.47	6.35	6.31	6.59	6.55	6.93	6.89	7.20	7.20
11	7.01	6.97	6.51	6.47	6.35	6.31	6.60	6.56	6.98	6.90	7.21	7.17
12	7.08	7.00	6.59	6.51	6.31	6.27	6.61	6.57	6.91	6.88	7.25	7.01
13	6.98	6.90	6.59	6.51	6.35	6.31	6.66	6.62	6.97	6.93	7.05	7.01
14	6.93	6.89	6.55	6.51	6.35	6.31	6.72	6.64	6.98	6.98	7.04	7.00
15	6.92	6.84	6.55	6.43	6.35	6.31	6.72	6.64	7.03	6.99	7.04	7.00
16	6.90	6.86	6.43	6.39	6.39	6.31	6.73	6.69	7.05	7.01	7.00	7.00
17	6.93	6.85	6.43	6.39	6.43	6.27	6.74	6.74	7.10	6.86	7.00	6.95
18	6.88	6.84	6.39	6.39	6.39	6.35	6.78	6.73	6.91	6.87	6.99	6.95
19	6.85	6.79	6.39	6.35	6.35	6.27	6.52	6.44	6.93	6.89	6.95	6.90
20	6.82	6.78	6.39	6.35	6.39	6.24	6.54	6.46	6.98	6.94	---	---
21	---	---	6.39	6.35	6.39	6.27	6.59	6.55	7.00	6.96	---	---
22	---	---	6.39	6.36	6.25	6.25	6.60	6.56	7.01	6.94	---	---
23	---	---	6.39	6.35	6.26	6.22	6.62	6.58	6.99	6.95	---	---
24	---	---	6.39	6.35	6.31	6.27	6.67	6.63	7.01	7.01	---	---
25	6.63	6.55	6.35	6.31	6.33	6.29	6.68	6.64	7.02	6.98	---	---
26	6.62	6.54	6.35	6.31	6.34	6.30	6.74	6.66	7.08	7.00	---	---
27	6.59	6.55	6.35	6.35	6.35	6.31	6.79	6.71	7.05	7.05	---	---
28	6.63	6.55	6.35	6.35	6.36	6.32	6.76	6.72	7.07	7.03	---	---
29	6.59	6.51	6.35	6.35	6.37	6.33	6.78	6.70	7.08	7.04	7.14	7.10
30	6.59	6.51	6.35	6.31	6.38	6.34	6.79	6.75	7.09	7.05	7.18	7.10
31	---	---	6.35	6.31	---	---	6.84	6.76	7.07	7.07	---	---
MONTH	---	---	6.78	6.31	6.43	6.22	6.84	6.37	7.10	6.68	---	---

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.59	6.59	6.35	6.35	6.53	6.49	6.39	6.31	6.37	6.29
2	---	---	6.78	6.75	6.35	6.35	6.46	6.46	6.40	6.12	6.47	6.31
3	---	---	6.75	6.71	6.35	6.31	6.55	6.47	6.21	6.13	6.39	6.31
4	---	---	6.67	6.59	6.35	6.31	6.52	6.48	6.23	6.15	6.49	6.33
5	---	---	6.67	6.59	6.35	6.31	6.53	6.49	6.24	6.16	6.46	6.35
6	---	---	6.75	6.59	6.31	6.31	6.54	6.46	6.29	6.17	6.48	6.44
7	---	---	6.63	6.47	6.31	6.27	6.56	6.52	6.31	6.19	6.53	6.45
8	---	---	6.55	6.47	6.31	6.27	6.57	6.49	6.28	6.20	6.62	6.46
9	---	---	6.55	6.47	6.31	6.27	6.54	6.46	6.29	6.21	6.56	6.51
10	7.06	6.98	6.51	6.43	6.31	6.27	6.55	6.47	6.31	6.23	6.61	6.57
11	7.05	7.01	6.55	6.47	6.27	6.27	6.52	6.52	6.36	6.24	6.66	6.62
12	7.08	7.00	6.59	6.47	6.31	6.24	6.53	6.49	6.37	6.25	6.62	6.42
13	7.01	6.94	6.51	6.47	6.31	6.24	6.54	6.47	6.39	6.27	6.50	6.38
14	7.05	6.93	6.59	6.55	6.27	6.24	6.53	6.49	6.39	6.32	6.50	6.42
15	6.92	6.92	6.55	6.51	6.31	6.24	6.53	6.49	6.37	6.29	6.49	6.45
16	6.94	6.86	6.51	6.47	6.51	6.27	6.54	6.50	6.33	6.31	6.64	6.45
17	7.00	6.85	6.47	6.43	6.51	6.43	6.51	6.51	6.40	6.16	6.60	6.56
18	6.92	6.84	6.55	6.47	6.51	6.43	6.51	6.16	6.25	6.17	6.56	6.48
19	6.83	6.83	6.51	6.43	6.43	6.39	6.21	6.17	6.34	6.11	6.55	6.47
20	6.82	6.78	6.51	6.43	6.47	6.39	6.23	6.19	6.32	6.16	---	---
21	---	---	6.47	6.43	6.43	6.35	6.24	6.20	6.49	6.18	---	---
22	---	---	6.47	6.43	6.48	6.40	6.25	6.21	6.47	6.19	---	---
23	---	---	6.43	6.39	6.49	6.41	6.23	6.23	6.41	6.21	---	---
24	---	---	6.47	6.43	6.50	6.46	6.28	6.20	6.38	6.26	---	---
25	6.70	6.67	6.47	6.39	6.44	6.44	6.29	6.25	6.39	6.23	---	---
26	6.66	6.65	6.39	6.39	6.45	6.42	6.31	6.23	6.49	6.21	---	---
27	6.69	6.55	6.39	6.35	6.46	6.42	6.28	6.24	6.42	6.30	---	---
28	6.63	6.63	6.39	6.35	6.44	6.40	6.29	6.25	6.40	6.28	---	---
29	6.67	6.59	6.39	6.35	6.45	6.41	6.35	6.27	6.45	6.29	6.86	6.86
30	6.63	6.59	6.39	6.35	6.46	6.38	6.32	6.28	6.50	6.31	6.90	6.86
31	---	---	6.35	6.31	---	---	6.33	6.29	6.44	6.23	---	---
MONTH	---	---	6.78	6.31	6.51	6.24	6.57	6.16	6.50	6.11	---	---

PUMP NUMBER 3

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.78	6.71	6.75	6.63	6.96	6.57	7.17	6.94	7.35	6.60
2	---	---	6.78	6.75	6.71	6.71	6.85	6.69	7.22	7.10	6.85	6.78
3	---	---	6.78	6.67	6.71	6.59	7.02	6.82	7.11	6.95	7.02	6.70
4	---	---	6.90	6.67	6.75	6.55	7.03	6.87	7.21	6.81	7.27	6.68
5	---	---	6.71	6.59	6.71	6.59	7.20	7.04	7.12	6.82	7.09	6.82
6	---	---	6.67	6.59	6.75	6.59	7.21	6.93	6.99	6.91	7.15	6.79
7	---	---	6.67	6.55	6.71	6.67	7.23	7.03	6.97	6.93	7.28	6.93
8	---	---	6.59	6.51	6.75	6.63	7.32	7.00	7.06	6.86	7.32	6.81
9	---	---	6.59	6.47	6.78	6.71	7.29	6.58	7.11	7.03	7.42	6.83
10	7.18	7.02	6.55	6.47	6.71	6.59	7.30	7.18	7.09	7.05	7.24	7.00
11	7.09	7.01	6.67	6.47	6.78	6.67	7.35	7.15	7.18	7.10	7.32	7.09
12	7.12	7.08	6.71	6.47	6.67	6.55	7.32	7.08	7.19	7.11	7.13	7.09
13	7.10	6.98	6.71	6.59	6.59	6.51	7.33	7.01	7.21	7.13	7.36	7.05
14	7.09	6.97	6.59	6.55	6.67	6.55	7.39	7.11	7.22	7.18	7.43	6.73
15	7.07	6.92	6.59	6.47	6.67	6.55	7.43	7.23	7.23	7.11	7.19	6.84
16	7.05	6.96	6.71	6.47	6.63	6.51	7.48	7.36	7.37	6.97	6.56	6.33
17	7.08	6.97	6.71	6.47	6.63	6.55	7.45	7.29	7.10	7.14	6.52	6.40
18	7.03	6.92	6.63	6.47	6.59	6.39	7.02	7.41	7.15	7.03	6.63	6.52
19	6.98	6.91	6.67	6.47	6.43	6.39	7.19	6.99	7.21	7.09	6.59	6.55
20	7.01	6.97	6.75	6.47	6.43	6.39	7.36	6.97	7.22	6.59	---	---
21	---	---	6.71	6.51	6.39	6.35	7.06	6.94	7.24	6.73	---	---
22	---	---	6.71	6.47	6.40	6.32	7.19	7.03	7.17	6.62	---	---
23	---	---	6.90	6.51	6.41	6.37	7.29	6.58	7.11	6.92	---	---
24	---	---	6.86	6.59	6.42	6.38	7.33	7.02	7.28	7.12	---	---
25	6.86	6.74	6.90	6.63	6.41	6.37	7.27	7.11	7.25	6.70	---	---
26	6.85	6.77	6.86	6.75	6.45	6.38	7.33	7.17	7.00	6.61	---	---
27	6.89	6.70	6.82	6.71	6.50	6.39	7.26	7.02	6.81	6.66	---	---
28	6.82	6.78	6.78	6.67	6.54	6.44	7.31	6.93	6.75	6.72	---	---
29	6.82	6.67	6.75	6.71	6.96	6.49	7.29	7.05	6.96	6.73	6.98	6.90
30	6.78	6.75	6.78	6.71	7.05	6.65	7.18	7.14	7.01	6.81	6.98	6.86
31	---	---	6.75	6.63	---	---	7.15	7.11	7.22	7.10	---	---
MONTH	---	---	6.90	6.47	7.05	6.32	7.48	6.57	7.37	6.59	---	---

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	7.15	7.04	---	---	---	---
2	---	---	---	---	---	---	7.05	7.01	---	---	---	---
3	---	---	---	---	---	---	7.10	7.06	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	7.34	7.26
7	---	---	---	---	---	---	---	---	---	---	7.40	7.20
8	---	---	---	---	---	---	---	---	---	---	7.32	7.25
9	---	---	---	---	---	---	---	---	---	---	7.38	7.26
10	---	---	---	---	---	---	---	---	---	---	7.39	7.36
11	---	---	---	---	---	---	---	---	---	---	7.48	7.36
12	---	---	---	---	---	---	---	---	---	---	7.45	7.32
13	---	---	---	---	6.94	6.75	---	---	---	---	7.36	7.28
14	---	---	---	---	6.98	6.82	---	---	---	---	7.39	7.24
15	---	---	---	---	6.90	6.82	---	---	---	---	7.27	7.15
16	---	---	---	---	6.63	6.55	---	---	---	---	7.11	6.96
17	---	---	---	---	6.63	6.51	---	---	---	---	6.95	6.72
18	---	---	---	---	6.51	6.43	---	---	---	---	6.87	6.67
19	---	---	---	---	6.51	6.43	---	---	---	---	6.90	6.67
20	---	---	---	---	6.51	6.43	---	---	---	---	---	---
21	---	---	---	---	6.67	6.39	---	---	---	---	---	---
22	---	---	---	---	6.91	6.52	---	---	---	---	---	---
23	---	---	---	---	7.12	6.61	---	---	---	---	---	---
24	---	---	---	---	7.29	6.74	---	---	---	---	---	---
25	---	---	---	---	7.15	6.84	---	---	---	---	---	---
26	---	---	---	---	7.32	7.00	---	---	---	---	---	---
27	---	---	---	---	7.33	7.17	---	---	---	---	---	---
28	---	---	---	---	7.26	7.10	---	---	---	---	---	---
29	---	---	---	---	7.15	7.07	---	---	---	---	---	---
30	---	---	---	---	7.32	7.05	---	---	---	---	7.33	7.18
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 1

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.1	12.1	11.9	11.7	14.1	14.1	13.9	13.7	13.9	13.9
2	---	---	12.3	12.2	11.9	11.7	14.1	14.1	13.9	13.7	13.9	13.7
3	---	---	12.5	12.3	11.9	11.7	14.3	13.9	13.9	13.7	13.9	13.7
4	---	---	13.1	12.5	11.9	11.7	14.1	13.9	13.9	13.7	14.1	13.7
5	---	---	13.5	12.3	11.9	11.7	14.1	13.9	13.9	13.7	13.9	13.7
6	---	---	13.5	12.7	11.9	11.7	14.1	13.9	13.9	13.7	14.1	13.9
7	---	---	13.3	12.9	11.9	11.7	14.1	13.9	13.7	13.5	14.1	13.7
8	---	---	13.1	12.9	11.9	11.7	14.1	13.9	13.7	13.7	13.9	13.7
9	---	---	13.1	12.3	11.9	11.7	14.1	13.9	13.9	13.7	14.1	13.7
10	---	---	12.7	12.3	11.9	11.7	14.1	13.9	13.9	13.7	14.1	13.7
11	11.5	11.3	12.7	12.1	11.9	11.7	14.1	13.9	13.7	13.7	14.1	13.9
12	11.9	11.3	12.5	12.1	12.1	11.9	14.1	13.7	13.9	13.5	14.1	13.9
13	11.5	11.3	12.3	12.1	12.3	12.1	14.1	13.9	13.9	13.7	14.1	13.9
14	11.3	11.3	12.5	12.3	12.3	12.1	13.9	13.9	13.9	13.7	14.1	13.9
15	11.3	11.1	12.5	11.9	12.3	12.1	13.9	13.7	13.9	13.7	14.1	13.9
16	11.5	11.1	12.1	11.9	12.3	12.1	13.9	13.7	13.9	13.7	14.1	13.9
17	11.5	11.1	12.1	11.9	15.9	12.1	13.9	13.7	13.7	13.7	14.1	13.9
18	11.7	11.3	11.9	11.7	15.7	15.1	13.9	13.7	13.9	13.7	14.1	13.9
19	11.5	11.3	11.9	11.7	15.3	14.9	13.9	13.7	13.9	13.7	14.1	14.1
20	11.5	11.3	11.9	11.7	15.5	14.7	14.1	13.9	13.9	13.7	14.3	14.1
21	---	---	11.9	11.7	15.7	14.9	13.9	13.7	13.9	13.7	14.5	14.1
22	---	---	11.9	11.5	14.7	14.3	13.9	13.7	13.9	13.7	14.5	14.1
23	---	---	11.7	11.5	14.5	14.1	13.9	13.7	14.1	13.7	14.5	14.3
24	---	---	11.7	11.5	14.5	14.3	13.9	13.7	13.9	13.7	14.7	14.3
25	11.7	11.5	11.7	11.5	14.5	14.3	13.9	13.7	13.9	13.7	14.7	14.5
26	11.7	11.7	11.7	11.5	14.5	14.3	13.9	13.7	13.9	13.7	14.7	14.5
27	11.9	11.7	11.9	11.7	14.5	14.3	13.9	13.7	13.9	13.7	14.7	14.5
28	12.1	11.7	11.7	11.5	14.3	14.1	13.9	13.7	13.9	13.7	14.9	14.5
29	12.3	11.9	11.9	11.5	14.3	14.1	13.9	13.7	14.1	13.7	14.7	14.7
30	12.3	11.9	11.9	11.7	14.3	14.1	13.9	13.7	13.9	13.7	14.9	14.7
31	---	---	11.9	11.7	---	---	13.9	13.7	13.9	13.7	---	---
MONTH	---	---	13.5	11.5	15.9	11.7	14.3	13.7	14.1	13.5	14.9	13.7

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PUMP NUMBER 2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	12.3	12.3	12.7	12.5	16.4	15.7	16.4	15.9	20.8	18.2
2	---	---	17.6	13.3	12.7	12.5	16.3	16.1	16.4	15.9	19.2	17.6
3	---	---	17.8	14.3	12.9	12.7	16.3	15.7	16.4	16.1	19.0	18.4
4	---	---	15.1	14.1	12.9	12.7	16.1	15.9	16.4	16.1	19.6	18.0
5	---	---	15.7	14.3	12.9	12.5	16.3	15.9	16.6	16.3	19.6	18.2
6	---	---	14.3	13.7	12.9	12.7	16.1	15.9	16.8	15.9	19.6	18.6
7	---	---	13.9	13.1	13.1	12.7	16.1	15.7	16.6	16.3	19.6	18.4
8	---	---	13.3	12.9	13.3	12.9	16.3	15.7	16.4	16.3	20.0	17.8
9	---	---	13.1	12.9	13.5	12.9	16.3	15.7	16.8	16.3	19.8	18.8
10	12.3	11.7	13.3	12.7	13.1	12.9	16.1	15.7	16.8	16.3	19.8	19.0
11	12.1	11.7	13.1	12.9	13.7	12.9	16.3	15.9	16.8	16.1	19.6	18.8
12	12.7	11.5	12.9	12.5	14.1	13.1	16.3	15.7	17.0	16.3	19.8	19.0
13	11.7	11.3	13.1	12.9	14.3	13.5	16.3	15.3	17.0	16.1	20.0	18.4
14	12.5	11.5	13.3	12.7	14.7	13.7	16.3	15.7	17.2	16.5	20.0	18.4
15	11.5	11.3	13.1	12.5	15.5	13.9	16.3	15.7	17.0	16.5	19.6	18.8
16	11.9	11.5	12.7	12.3	16.6	15.1	16.3	15.7	17.4	16.3	20.6	19.2
17	13.7	11.5	12.7	12.3	16.4	15.9	16.3	15.7	17.2	16.5	20.4	20.0
18	12.1	11.7	12.7	12.3	16.3	16.1	16.4	15.7	17.2	16.3	20.4	19.8
19	11.9	11.5	12.7	12.3	16.3	15.9	16.3	15.7	18.6	16.3	20.8	19.6
20	11.7	11.5	12.7	12.1	16.6	15.7	16.4	15.9	18.0	16.3	---	---
21	---	---	12.7	12.3	16.8	15.9	16.3	16.1	18.4	15.9	---	---
22	---	---	12.5	12.3	16.1	15.7	16.4	16.1	17.8	16.3	---	---
23	---	---	12.5	12.1	16.3	15.7	16.4	15.9	17.8	16.6	---	---
24	---	---	12.5	12.3	16.3	16.1	16.4	15.7	17.8	15.6	---	---
25	12.1	11.9	12.9	12.3	16.4	16.1	16.6	15.7	18.8	16.8	18.2	18.0
26	12.3	11.9	12.7	12.5	16.8	16.1	16.6	15.9	18.6	16.4	18.0	17.8
27	12.5	11.9	12.7	12.3	16.4	15.9	16.6	15.9	17.8	17.2	18.0	17.6
28	12.5	12.1	12.7	12.3	16.3	16.1	16.4	15.9	18.8	17.2	17.8	17.2
29	12.3	12.1	12.7	12.5	16.3	15.9	16.8	15.9	18.4	17.2	17.4	17.0
30	12.5	12.3	13.1	12.5	16.3	15.7	16.4	15.9	18.8	17.2	17.4	17.0
31	---	---	12.7	12.5	---	---	16.4	15.9	19.4	17.8	---	---
MONTH	---	---	17.8	12.1	16.8	12.5	16.8	15.3	19.4	15.9	---	---

PUMP NUMBER 3

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	17.2	16.4	20.2	17.2	19.6	18.8	27.2	26.5	27.6	25.1
2	---	---	17.8	16.6	19.4	17.6	20.2	19.6	27.0	21.7	26.1	25.5
3	---	---	18.0	15.9	19.6	18.2	20.4	19.8	27.2	25.7	26.5	24.7
4	---	---	18.6	16.3	20.8	18.6	20.4	20.0	27.8	25.3	26.5	24.9
5	---	---	17.6	15.9	20.8	18.0	21.2	20.2	29.0	24.9	26.1	25.3
6	---	---	15.3	14.7	21.4	19.2	21.2	20.2	27.4	26.1	26.3	25.3
7	---	---	14.7	13.7	20.2	19.0	21.9	20.8	26.8	25.9	25.9	25.5
8	---	---	13.5	13.5	20.6	19.2	22.9	21.0	26.8	26.5	26.1	24.9
9	---	---	14.5	13.5	21.0	18.4	22.7	20.0	26.3	25.9	26.7	24.9
10	13.5	12.9	14.3	13.7	20.2	18.8	23.7	21.7	26.3	25.9	26.1	25.7
11	13.5	12.3	14.5	13.9	20.2	19.4	24.5	21.9	25.9	25.7	26.3	25.9
12	13.9	12.1	15.1	13.3	20.6	19.0	26.5	22.3	26.1	25.7	26.1	25.7
13	13.7	11.9	15.1	14.3	21.4	19.0	24.5	22.7	26.1	25.7	26.5	25.9
14	14.1	12.9	14.3	13.9	20.4	18.2	24.9	23.1	26.1	25.9	26.8	25.3
15	13.7	12.5	14.3	13.3	20.0	18.0	24.5	23.3	26.3	25.9	26.1	25.5
16	14.9	12.9	14.9	13.5	18.0	17.6	24.7	24.1	26.5	25.3	24.3	22.7
17	15.9	13.5	15.5	13.7	17.6	16.8	25.9	24.1	26.3	26.1	23.1	22.5
18	16.6	12.9	14.7	13.9	17.2	17.0	26.8	23.7	26.1	25.9	23.3	22.1
19	15.5	13.3	14.9	14.3	17.4	16.8	26.7	24.5	26.8	25.9	23.3	22.5
20	15.5	14.7	16.3	14.1	17.4	17.0	26.7	23.9	27.0	25.1	23.3	22.5
21	---	---	15.9	14.7	17.6	17.2	25.3	24.9	26.7	25.3	23.3	22.1
22	---	---	15.3	12.3	17.8	17.2	26.3	24.3	27.2	24.9	23.7	22.1
23	---	---	16.8	14.7	17.8	17.4	26.1	25.3	26.5	25.9	22.5	21.4
24	---	---	16.4	14.7	18.0	17.4	27.0	24.7	26.8	26.3	21.7	21.2
25	17.8	15.3	21.4	14.5	18.2	17.6	26.8	25.7	26.5	25.3	21.4	20.6
26	18.4	14.9	17.0	15.5	18.6	18.0	27.4	25.3	26.1	24.9	20.8	20.2
27	18.8	14.7	17.4	15.9	18.8	18.0	27.2	24.5	25.9	24.9	20.6	20.2
28	18.4	16.3	17.2	15.7	18.8	18.4	27.8	25.1	25.5	25.1	20.4	19.6
29	17.8	15.1	18.6	15.7	20.2	18.2	27.2	25.7	25.9	24.9	20.0	19.8
30	17.4	16.1	19.6	16.4	20.0	19.2	27.6	25.7	26.5	25.7	20.0	19.6
31	---	---	19.4	17.2	---	---	27.2	25.5	26.3	25.1	---	---
MONTH	---	---	21.4	12.3	21.4	16.8	27.8	18.8	29.0	21.7	27.6	19.6

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	26.7	26.5	---	---	---	---
2	---	---	---	---	---	---	26.1	25.9	---	---	---	---
3	---	---	---	---	---	---	25.3	25.1	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	26.3	26.1
7	---	---	---	---	---	---	---	---	---	---	27.4	25.9
8	---	---	---	---	---	---	---	---	---	---	27.6	25.9
9	---	---	---	---	---	---	---	---	---	---	27.6	26.5
10	---	---	---	---	---	---	---	---	---	---	27.0	26.5
11	---	---	---	---	---	---	---	---	---	---	26.5	26.3
12	---	---	---	---	---	---	---	---	---	---	27.2	26.3
13	---	---	---	---	24.7	23.3	---	---	---	---	27.8	25.9
14	---	---	---	---	25.5	24.1	---	---	---	---	26.8	26.5
15	---	---	---	---	24.7	23.3	---	---	---	---	26.5	25.7
16	---	---	---	---	20.4	18.8	---	---	---	---	25.7	25.5
17	---	---	---	---	19.0	17.4	---	---	---	---	25.3	24.5
18	---	---	---	---	18.0	17.4	---	---	---	---	24.3	23.7
19	---	---	---	---	18.4	18.0	---	---	---	---	25.1	23.3
20	---	---	---	---	19.0	18.0	---	---	---	---	24.7	23.5
21	---	---	---	---	21.5	18.4	---	---	---	---	24.3	23.1
22	---	---	---	---	23.3	19.4	---	---	---	---	24.1	23.3
23	---	---	---	---	24.1	20.4	---	---	---	---	23.1	21.7
24	---	---	---	---	24.7	20.8	---	---	---	---	21.5	21.2
25	---	---	---	---	25.1	23.5	---	---	---	---	21.3	20.8
26	---	---	---	---	28.8	25.1	---	---	---	---	21.5	20.6
27	---	---	---	---	28.4	25.7	---	---	---	---	22.3	20.2
28	---	---	---	---	27.6	26.8	---	---	---	---	21.5	20.2
29	---	---	---	---	27.6	26.1	---	---	---	---	21.2	20.6
30	---	---	---	---	28.2	25.9	---	---	---	---	20.4	20.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 1

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.7	8.6	4.9	4.1	3.5	3.4	1.7	1.7	.5	.4
2	---	---	11.4	10.4	4.8	4.1	3.3	3.0	1.7	1.6	.5	.4
3	---	---	9.9	9.7	4.4	3.8	3.1	2.9	.7	.6	.4	.4
4	---	---	9.8	9.4	4.6	4.2	2.9	2.5	.8	.7	.5	.4
5	---	---	9.4	8.8	4.6	3.8	2.6	2.5	.9	.8	.5	.4
6	---	---	10.1	8.9	4.0	3.6	2.4	2.1	.9	.8	.5	.4
7	---	---	10.7	10.1	4.1	3.7	2.5	2.1	.9	.8	.5	.4
8	---	---	10.5	10.2	4.0	3.1	2.2	2.1	1.0	.9	.5	.4
9	---	---	9.9	9.3	3.8	3.3	2.4	2.0	1.1	1.0	.5	.4
10	10.1	9.9	9.6	9.3	3.5	3.1	2.2	1.9	1.1	1.0	.5	.4
11	10.1	9.7	9.7	9.3	3.5	3.1	2.0	1.8	1.2	1.0	.5	.4
12	10.3	9.9	9.6	9.2	3.4	2.7	1.9	1.8	1.3	1.1	.5	.3
13	10.2	10.0	9.3	8.9	3.5	3.2	1.8	1.8	1.3	1.2	.5	.4
14	10.1	10.0	9.0	8.8	3.2	2.9	1.9	1.7	1.3	1.2	.5	.4
15	10.2	9.9	8.9	8.3	3.1	2.6	1.9	1.8	1.4	1.2	.6	.4
16	10.3	9.9	8.4	8.2	2.8	2.2	1.9	1.8	1.4	1.3	.6	.5
17	10.2	9.9	8.2	7.8	8.2	2.4	1.9	1.8	1.5	.5	.6	.6
18	10.2	10.0	7.7	7.3	7.9	7.5	2.0	.7	.6	.5	.7	.6
19	10.0	9.7	7.5	7.2	7.9	6.7	.8	.7	.7	.6	.7	.8
20	9.9	9.7	7.1	6.7	8.1	6.0	.9	.8	.7	.6	.4	.3
21	---	---	7.0	6.6	8.2	6.9	.9	.9	.7	.6	.4	.3
22	---	---	6.7	6.1	6.4	5.9	1.0	.9	.7	.7	.4	.4
23	---	---	6.4	6.0	5.6	5.2	1.1	1.0	.5	.3	.5	.4
24	---	---	6.1	5.8	5.2	4.9	1.2	1.1	.8	.7	.5	.4
25	9.3	9.1	6.0	5.3	5.2	5.0	1.2	1.1	.8	.8	.6	.5
26	9.4	9.0	5.8	5.5	5.1	4.8	1.2	1.2	.9	.8	.5	.5
27	9.4	9.2	5.6	5.3	5.0	4.5	1.4	1.2	.9	.8	.7	.6
28	9.5	9.0	5.2	4.9	4.7	4.0	1.4	1.3	1.0	.9	.7	.6
29	9.1	8.8	5.2	4.5	4.2	3.9	1.5	1.4	1.1	.9	.8	.8
30	9.0	8.6	5.1	4.3	4.0	3.6	1.5	1.5	1.1	1.0	.8	.8
31	---	---	5.2	4.1	---	---	1.6	1.5	.4	1.1	---	---
MONTH	---	---	11.4	4.1	8.2	2.2	3.5	.7	1.7	.3	.8	.3

03400798 MARTINS FORK LAKE AT MARTINS FORK DAM NEAR SMITH, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

PUMP NUMBER 2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	9.6	9.3	7.2	6.9	7.2	6.5	3.0	2.4	1.7	.4
2	---	---	11.5	11.2	7.3	6.7	6.7	6.4	2.7	1.8	.5	.4
3	---	---	10.7	9.9	7.1	6.6	7.2	6.5	2.2	1.5	.4	.4
4	---	---	9.8	9.7	7.1	5.9	6.9	6.5	2.0	1.2	.5	.4
5	---	---	9.5	9.3	7.0	6.7	6.8	6.6	2.1	1.1	.5	.4
6	---	---	10.0	9.4	7.0	6.6	6.7	6.3	2.3	.8	.5	.4
7	---	---	10.6	9.9	6.8	6.5	6.6	6.2	1.7	1.1	.5	.4
8	---	---	10.4	10.0	6.7	6.2	6.4	5.8	1.8	1.1	.5	.4
9	---	---	9.7	9.5	7.0	6.0	6.4	5.5	2.1	1.1	.5	.4
10	10.2	9.8	9.8	9.6	6.4	6.0	6.2	5.8	2.1	1.2	.5	.4
11	10.1	9.7	9.7	9.3	6.7	5.7	6.2	5.7	1.9	1.2	.5	.4
12	10.1	9.9	9.6	9.3	6.6	5.3	6.5	5.6	1.9	1.2	.5	.4
13	10.0	9.6	9.4	9.1	6.6	6.0	6.5	5.1	2.0	1.3	.5	.4
14	10.3	10.0	9.1	8.8	6.4	5.8	6.1	5.3	1.6	1.3	.6	.5
15	10.1	9.7	9.1	8.9	6.4	5.3	5.8	5.3	1.9	1.5	.6	.5
16	10.2	9.8	9.0	8.6	8.4	6.0	5.6	5.3	2.1	1.5	---	---
17	10.2	9.6	9.0	8.7	8.6	8.3	5.6	4.8	1.8	1.5	---	---
18	10.2	9.8	8.8	8.6	8.7	8.5	5.8	4.9	1.0	.5	---	---
19	10.2	9.8	8.6	8.1	8.8	8.5	4.6	3.6	2.5	.5	---	---
20	9.9	9.8	8.5	8.0	8.8	8.5	4.6	3.8	1.5	.6	---	---
21	---	---	8.5	8.0	8.8	8.5	4.3	3.7	1.6	.5	---	---
22	---	---	8.4	7.2	8.6	8.2	4.3	3.7	1.1	.6	---	---
23	---	---	8.1	7.8	8.6	8.4	3.2	3.2	1.5	1.0	---	---
24	---	---	8.1	7.7	8.5	8.3	4.3	2.9	.8	.7	---	---
25	10.0	9.7	8.0	7.5	8.7	8.2	4.4	2.8	1.6	.8	---	---
26	10.0	9.7	7.9	7.6	8.2	7.8	3.8	2.8	1.1	.8	---	---
27	10.0	9.5	7.6	7.3	8.0	7.7	3.7	2.9	.9	.9	---	---
28	9.8	9.7	7.6	7.1	7.7	7.2	3.8	2.7	1.2	.9	---	---
29	9.8	9.5	7.5	7.2	7.6	6.9	3.8	2.4	1.1	1.0	---	---
30	9.8	9.2	7.6	7.3	7.5	5.6	3.5	2.4	1.1	1.0	---	---
31	---	---	7.2	7.0	---	---	3.2	2.4	1.1	.6	---	---
MONTH	---	---	11.5	7.0	8.8	5.3	7.2	2.4	3.0	.5	---	---

PUMP NUMBER 3

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	9.0	8.9	9.2	8.5	9.5	7.8	8.4	7.6	7.7	5.0
2	---	---	11.4	10.5	9.1	8.9	9.2	8.4	8.6	7.7	6.8	6.1
3	---	---	10.6	9.9	9.1	8.2	9.4	8.9	8.3	7.3	7.0	5.2
4	---	---	9.9	9.7	9.0	8.2	9.4	8.9	8.0	7.2	6.8	4.9
5	---	---	9.6	9.3	9.1	8.5	9.5	9.1	7.8	7.1	6.4	5.4
6	---	---	9.9	9.5	9.0	8.5	9.7	9.2	7.7	7.3	6.3	5.0
7	---	---	10.6	9.7	9.0	8.5	9.7	9.1	7.9	7.3	6.2	5.1
8	---	---	10.3	9.7	8.9	8.2	9.7	9.1	7.5	7.3	6.4	4.4
9	---	---	9.6	9.1	8.5	7.7	9.4	7.2	7.5	7.1	5.9	4.4
10	11.9	9.6	9.6	9.3	7.9	7.5	9.5	9.3	7.6	7.0	5.8	5.3
11	10.1	9.9	9.6	9.1	7.8	7.6	9.4	9.2	7.3	7.1	5.9	5.5
12	10.3	10.0	9.5	9.3	8.0	7.5	9.9	8.0	7.4	7.0	8.1	5.3
13	10.2	10.0	9.3	9.1	8.1	7.4	9.5	8.7	7.2	6.8	8.3	7.8
14	10.4	10.0	9.1	8.8	8.1	7.7	9.5	8.9	7.2	6.7	8.3	6.3
15	10.3	9.9	9.3	8.9	8.1	7.8	9.7	9.1	7.0	6.7	8.0	7.2
16	10.6	10.2	9.3	9.0	8.1	7.8	9.5	9.3	7.0	6.6	---	---
17	10.4	9.3	9.4	8.8	8.4	7.8	9.4	8.6	7.6	6.6	---	---
18	10.2	10.0	9.4	8.7	8.9	8.3	9.3	8.4	7.8	7.7	6.2	5.4
19	10.5	9.9	9.4	8.6	8.9	8.6	8.6	7.8	7.9	7.4	5.8	5.2
20	10.3	10.1	9.6	8.5	8.9	8.6	9.3	7.8	7.9	6.8	5.9	5.2
21	---	---	9.7	8.7	8.8	8.6	8.9	8.4	7.8	7.0	7.4	5.7
22	---	---	9.3	8.0	8.6	8.3	9.5	8.2	7.5	6.5	7.7	5.9
23	---	---	9.6	8.5	8.7	8.2	9.1	7.1	7.3	7.1	6.8	5.3
24	---	---	9.3	8.6	8.3	7.9	9.1	7.8	7.3	6.7	6.9	6.3
25	10.2	9.8	9.5	8.5	8.2	8.0	8.8	8.2	6.9	5.9	6.9	5.8
26	10.8	10.0	9.5	9.1	8.6	7.5	9.0	8.3	6.5	5.4	6.8	6.0
27	10.6	10.0	9.5	8.9	8.4	7.9	9.2	8.4	6.2	5.4	6.8	6.5
28	10.3	9.5	9.3	8.5	8.4	7.9	9.0	7.8	5.6	5.2	7.7	6.2
29	10.5	9.2	9.3	8.5	9.8	7.9	8.9	8.3	6.0	4.7	7.9	6.2
30	10.1	9.7	9.3	8.7	9.8	8.5	8.7	8.4	5.6	5.0	7.1	6.1
31	---	---	9.2	8.2	---	---	8.8	8.3	7.8	5.1	---	---
MONTH	---	---	11.4	8.0	9.8	7.4	9.9	7.1	8.6	4.7	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
PUMP NUMBER 4

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	8.2	8.0	---	---	---	---
2	---	---	---	---	---	---	8.0	7.7	---	---	---	---
3	---	---	---	---	---	---	8.1	7.9	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	5.8	5.7
7	---	---	---	---	---	---	---	---	---	---	5.7	5.2
8	---	---	---	---	---	---	---	---	---	---	5.4	5.2
9	---	---	---	---	---	---	---	---	---	---	5.6	5.2
10	---	---	---	---	---	---	---	---	---	---	5.5	5.2
11	---	---	---	---	---	---	---	---	---	---	5.7	5.5
12	---	---	---	---	---	---	---	---	---	---	7.7	5.5
13	---	---	---	---	7.9	7.8	---	---	---	---	7.8	7.6
14	---	---	---	---	8.0	7.8	---	---	---	---	7.8	7.4
15	---	---	---	---	7.9	7.7	---	---	---	---	7.9	7.5
16	---	---	---	---	7.9	7.7	---	---	---	---	7.7	7.3
17	---	---	---	---	8.5	7.8	---	---	---	---	7.2	6.3
18	---	---	---	---	8.5	8.3	---	---	---	---	7.4	6.6
19	---	---	---	---	8.3	8.1	---	---	---	---	7.6	6.5
20	---	---	---	---	8.0	7.8	---	---	---	---	8.0	7.5
21	---	---	---	---	9.0	8.0	---	---	---	---	8.2	7.2
22	---	---	---	---	9.0	8.5	---	---	---	---	7.9	7.5
23	---	---	---	---	9.0	8.5	---	---	---	---	7.4	6.8
24	---	---	---	---	10.0	8.5	---	---	---	---	7.4	6.7
25	---	---	---	---	9.8	8.2	---	---	---	---	7.3	6.9
26	---	---	---	---	8.6	7.8	---	---	---	---	7.4	7.0
27	---	---	---	---	9.2	7.8	---	---	---	---	7.6	6.9
28	---	---	---	---	7.9	7.6	---	---	---	---	7.7	7.3
29	---	---	---	---	8.1	7.7	---	---	---	---	7.8	7.4
30	---	---	---	---	8.7	8.1	---	---	---	---	7.8	7.1
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

03400800 MARTINS FORK NEAR SMITH, KY

LOCATION.--Lat 36°45'08", long 83°15'27", Harlan County, Hydrologic Unit 05130101, on left bank 150 ft downstream from State Highway 987 bridge, 0.3 mi downstream from Martins Fork Dam, 0.7 mi downstream from Crane Creek, 1.0 mi north of Smith, and at mile 15.3.

DRAINAGE AREA.--55.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1968-71, and annual maximums, water years 1968-70. April 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,259.00 ft above National Geodetic Vertical Datum of 1929. July 25, 1967 to Apr. 9, 1971, crest-stage gage at site 30 ft downstream at same datum, and Apr. 10, 1971 to Sept. 30, 1977, water-stage recorder at site 0.8 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow regulated by Martins Fork Dam (station 03400798) beginning January 1979.

AVERAGE DISCHARGE.--18 years, 117 ft^3/s, 28.47 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft^3/s, Apr. 4, 1977, gage height, 24.24 ft, from rating curve extended above 250 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 0.80 ft^3/s, Sept. 5, 6, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft^3/s, June 17, gage height, 13.14 ft; minimum, 5.2 ft^3/s, July 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	37	153	133	109	269	113	74	29	56	31	92
2	36	37	121	132	80	272	114	245	30	56	60	40
3	36	36	90	132	54	220	115	338	30	56	60	40
4	35	35	89	150	54	170	162	333	30	56	40	40
5	35	37	55	177	54	170	271	273	31	56	17	41
6	35	37	28	152	82	175	328	377	47	56	17	42
7	35	60	38	130	137	242	299	508	146	56	17	43
8	35	112	62	134	137	329	243	505	200	56	17	43
9	35	110	47	223	137	320	244	497	173	56	15	43
10	35	110	17	291	99	250	247	435	174	55	12	43
11	35	113	17	288	50	192	250	372	218	50	12	41
12	35	113	37	301	50	190	248	351	251	31	12	40
13	35	113	62	397	74	178	183	304	317	20	12	27
14	35	113	37	459	108	167	99	296	385	20	12	12
15	35	117	15	463	137	135	77	245	465	20	13	18
16	35	127	15	465	162	71	77	171	558	20	14	316
17	35	128	15	458	162	41	77	151	826	20	14	484
18	35	155	15	449	165	33	61	151	1010	20	14	458
19	35	185	14	439	167	34	13	116	731	16	14	294
20	36	188	10	302	169	51	9.9	80	469	11	14	131
21	29	320	11	213	250	119	9.6	81	373	29	14	83
22	14	339	60	211	317	186	9.6	118	199	49	15	84
23	15	255	117	208	383	209	9.6	143	248	49	17	85
24	16	250	94	207	386	209	9.8	142	262	28	18	87
25	17	232	210	204	326	209	9.7	142	272	10	40	162
26	17	210	300	202	322	206	9.9	130	204	10	94	220
27	17	207	294	157	317	146	10	89	92	11	120	217
28	27	183	287	113	291	72	10	89	92	11	119	157
29	39	155	243	112	---	72	11	86	76	10	117	67
30	37	155	153	112	---	72	11	63	62	10	120	68
31	37	---	133	110	---	88	---	28	---	10	122	---
TOTAL	969	4269	2839	7524	4779	5097	3331.1	6933	8020	1014	1213	3518
MEAN	31.3	142	91.6	243	171	164	111	224	267	32.7	39.1	117
MAX	39	339	300	465	386	329	328	508	1010	56	122	484
MIN	14	35	10	110	50	33	9.6	28	29	10	12	12
CFSM	.56	2.53	1.63	4.32	3.04	2.93	1.98	3.98	4.76	.58	.70	2.09
IN.	.64	2.83	1.88	4.98	3.16	3.37	2.20	4.59	5.31	.67	.80	2.33

CAL YR 1988 TOTAL 25833.8 MEAN 70.6 MAX 409 MIN 8.9 CFSM 1.26 IN. 17.10
WTR YR 1989 TOTAL 49506.1 MEAN 136 MAX 1010 MIN 9.6 CFSM 2.41 IN. 32.77

03400800 MARTINS FORK NEAR SMITH, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1971 to current year.
pH: December 1979 to current year.
WATER TEMPERATURE: October 1971 to current year.
DISSOLVED OXYGEN: December 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1971.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE (Water years 1972-77, 1980 to current year): Maximum, 561 microsiemens, Feb. 12, 1972; minimum, 49 microsiemens, Feb. 26, 1985.
pH: Maximum, 8.2 units, July 2, 1980; minimum, 6.2 units, Jan. 12, 1980, May 17, 1984, July 6, 1989.
WATER TEMPERATURE: Maximum, 32.5°C, Aug. 6, 1982; minimum, 0.0°C, on many days during winter months.
DISSOLVED OXYGEN: Maximum, 15.6 mg/L, Jan. 20, 21, 1985; minimum, 4.8 mg/L, Aug. 23, 1982.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 200 microsiemens, Jan. 13; minimum, 102 microsiemens, June 17.
pH: Maximum, 7.45 units, Nov. 1, 7; minimum, 6.24 units, July 6.
WATER TEMPERATURE: Maximum, 27.6°C, Aug. 4, Sept. 13; minimum, 3.9°C, Dec. 19.
DISSOLVED OXYGEN: Maximum, 12.5 mg/L, Dec. 20; minimum, 7.2 mg/L, Aug. 24, 25.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	176	165	184	176	173	169	169	161	141	133	149	137
2	173	165	184	176	176	169	165	149	141	137	149	137
3	173	165	184	176	176	169	157	149	141	137	149	137
4	173	161	184	176	176	169	157	149	141	137	149	137
5	173	165	184	169	176	169	165	157	145	137	157	141
6	180	169	184	176	176	169	173	161	145	137	165	133
7	180	173	184	176	176	169	169	161	145	137	161	145
8	184	176	180	149	173	169	192	145	145	137	145	132
9	188	180	157	137	176	169	196	165	145	137	140	121
10	188	180	173	149	176	169	169	129	153	141	141	118
11	188	184	169	157	173	169	169	125	149	141	149	122
12	188	180	173	157	176	169	161	133	145	137	153	125
13	188	180	173	169	173	169	200	133	145	137	145	122
14	188	180	176	165	173	169	141	114	145	137	137	122
15	188	180	169	161	173	169	145	110	149	137	161	125
16	188	180	173	161	173	165	169	141	149	141	153	137
17	188	180	169	161	173	165	145	106	153	145	153	141
18	188	180	169	161	173	165	141	110	153	145	157	145
19	188	180	173	165	173	165	137	114	149	137	153	145
20	188	180	169	165	173	169	149	122	145	137	149	141
21	188	180	169	161	176	165	149	125	145	118	161	145
22	188	180	169	161	176	169	145	137	149	129	161	145
23	188	180	173	161	173	161	141	133	153	133	157	137
24	188	180	173	161	169	145	141	133	153	133	157	145
25	188	180	165	157	161	141	137	129	141	133	165	145
26	188	180	161	153	161	137	133	125	137	129	161	153
27	184	176	169	153	173	118	133	125	141	133	161	149
28	184	176	173	161	141	122	137	129	141	133	165	149
29	184	176	165	161	169	145	137	129	---	---	165	157
30	184	176	173	165	169	161	137	129	---	---	165	157
31	184	176	---	---	169	161	137	133	---	---	165	157
MONTH	188	161	184	137	176	118	200	106	153	118	165	118

03400800 MARTINS FORK NEAR SMITH, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	165	157	165	153	173	157	142	129	180	161	---	---
2	169	153	165	153	165	153	145	141	169	157	---	---
3	169	157	165	153	165	149	149	141	165	157	---	---
4	161	149	165	145	165	157	145	137	165	149	---	---
5	153	133	169	149	165	149	145	16	157	0	---	---
6	157	137	157	118	169	153	141	135	157	149	---	---
7	153	137	149	122	165	157	141	133	161	153	---	---
8	165	145	149	141	161	149	153	129	161	153	---	---
9	157	129	153	145	173	153	153	145	161	153	---	---
10	141	129	157	145	169	157	153	145	157	149	---	---
11	149	137	157	141	165	149	157	145	157	153	---	---
12	157	141	157	137	161	141	165	110	157	153	---	---
13	157	149	157	145	169	145	153	141	157	149	---	---
14	157	149	161	149	169	137	149	141	157	149	---	---
15	161	149	157	149	161	125	153	145	157	149	---	---
16	157	149	161	149	133	114	153	145	157	149	---	---
17	165	149	161	149	114	102	157	149	157	149	---	---
18	161	153	161	153	118	106	157	145	161	153	---	---
19	161	153	161	153	125	110	157	145	161	153	---	---
20	161	157	165	153	129	110	157	145	161	153	---	---
21	161	153	161	153	133	122	153	141	161	153	---	---
22	161	153	169	153	133	125	157	149	161	153	---	---
23	161	153	165	153	137	125	161	149	161	137	---	---
24	161	153	165	157	137	129	161	153	169	98	---	---
25	161	153	169	153	137	133	165	157	165	145	---	---
26	161	153	165	149	137	129	165	157	169	157	---	---
27	161	157	165	157	137	122	169	133	173	165	---	---
28	165	157	165	153	133	125	169	157	169	165	---	---
29	165	157	165	153	133	125	169	157	173	165	161	153
30	165	149	169	153	137	125	165	157	176	165	165	157
31	---	---	173	153	---	---	165	157	---	---	---	---
MONTH	169	129	173	118	173	102	169	16	---	---	---	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.92	6.74	7.45	7.26	6.83	6.67	6.55	6.47	6.67	6.59	6.66	6.62
2	6.78	6.65	7.41	7.26	6.78	6.61	6.55	6.47	6.67	6.59	6.68	6.62
3	6.69	6.57	7.41	7.26	6.80	6.56	6.59	6.51	6.71	6.63	6.69	6.64
4	6.72	6.52	7.41	7.26	6.71	6.55	6.63	6.55	6.71	6.63	6.73	6.66
5	6.75	6.60	7.34	7.18	6.75	6.63	6.63	6.47	6.71	6.63	6.73	6.61
6	7.18	6.64	7.41	7.26	6.83	6.59	6.55	6.47	6.71	6.59	6.79	6.60
7	7.26	7.10	7.45	7.30	6.75	6.59	6.55	6.43	6.71	6.59	6.75	6.63
8	7.30	7.10	7.37	7.14	6.67	6.59	6.59	6.43	6.71	6.63	6.75	6.67
9	7.30	7.14	7.18	7.06	6.75	6.59	6.59	6.47	6.75	6.67	6.71	6.63
10	7.26	7.10	7.34	7.02	6.83	6.71	6.53	6.51	6.79	6.71	6.75	6.63
11	7.22	7.06	7.14	7.02	6.83	6.71	6.55	6.43	6.79	6.71	6.79	6.71
12	7.34	7.18	7.26	7.10	6.86	6.71	6.47	6.39	6.83	6.75	6.83	6.67
13	7.34	7.18	7.30	7.18	6.75	6.63	6.59	6.47	6.79	6.71	6.75	6.63
14	7.30	7.14	7.30	7.10	6.75	6.63	6.59	6.39	6.71	6.67	6.75	6.67
15	7.30	7.10	7.18	7.10	6.75	6.63	6.51	6.32	6.70	6.51	6.79	6.67
16	7.30	7.10	7.26	7.10	6.75	6.71	6.55	6.47	6.74	6.71	6.75	6.63
17	7.18	7.06	7.18	7.02	6.79	6.71	6.55	6.43	6.75	6.72	6.75	6.67
18	7.14	7.02	7.25	6.95	6.83	6.71	6.59	6.43	6.76	6.71	6.79	6.71
19	7.22	7.02	7.17	7.06	6.83	6.71	6.55	6.47	6.75	6.73	6.75	6.67
20	7.30	7.14	7.37	6.95	6.79	6.71	6.59	6.47	6.79	6.72	6.75	6.67
21	7.26	7.10	7.32	7.04	6.75	6.51	6.59	6.47	6.77	6.68	6.79	6.67
22	7.30	7.06	7.24	6.95	6.71	6.63	6.59	6.51	6.78	6.70	6.83	6.71
23	7.37	7.14	7.14	6.89	6.71	6.63	6.59	6.51	6.75	6.63	6.83	6.71
24	7.34	7.14	7.00	6.72	6.71	6.59	6.59	6.51	6.67	6.59	6.83	6.75
25	7.34	7.18	6.90	6.86	6.67	6.55	6.59	6.43	6.67	6.51	6.83	6.75
26	7.34	7.14	6.93	6.72	6.67	6.51	6.55	6.47	6.63	6.47	6.83	6.71
27	7.41	7.14	6.89	6.67	6.63	6.43	6.63	6.47	6.67	6.59	6.79	6.67
28	7.34	7.10	6.89	6.69	6.59	6.47	6.63	6.59	6.67	6.51	6.83	6.67
29	7.37	7.22	6.82	6.63	6.67	6.47	6.63	6.55	---	---	6.79	6.67
30	7.34	7.22	6.85	6.61	6.59	6.47	6.63	6.55	---	---	6.75	6.71
31	7.37	7.22	---	---	6.59	6.43	6.67	6.39	---	---	6.79	6.67
MONTH	7.41	6.52	7.45	6.61	6.86	6.43	6.67	6.32	6.83	6.47	6.83	6.60

03400800 MARTINS FORK NEAR SMITH, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.79	6.67	6.86	6.63	6.86	6.63	6.55	6.46	6.71	6.59	---	---
2	6.86	6.71	6.75	6.67	6.75	6.67	6.56	6.48	6.90	6.67	---	---
3	6.83	6.67	6.79	6.63	6.79	6.63	6.56	6.44	6.94	6.75	---	---
4	6.90	6.71	6.71	6.63	6.79	6.63	6.54	6.30	6.90	6.47	---	---
5	6.86	6.71	6.71	6.63	6.83	6.67	6.45	6.31	6.63	6.43	---	---
6	6.86	6.75	6.75	6.63	6.90	6.75	6.41	6.24	6.67	6.51	---	---
7	6.83	6.71	6.71	6.59	6.90	6.71	6.71	6.27	6.75	6.59	---	---
8	6.94	6.71	6.67	6.59	6.86	6.71	6.67	6.51	6.79	6.71	---	---
9	6.94	6.71	6.63	6.55	6.86	6.75	6.71	6.51	6.79	6.59	---	---
10	6.86	6.71	6.67	6.55	6.90	6.67	6.71	6.51	6.75	6.59	---	---
11	6.83	6.75	6.67	6.59	6.79	6.63	6.71	6.35	6.71	6.59	---	---
12	6.86	6.71	6.71	6.63	6.79	6.59	6.75	6.43	6.71	6.55	---	---
13	6.75	6.67	6.79	6.67	6.79	6.67	6.67	6.51	6.71	6.51	6.62	6.31
14	6.75	6.67	6.75	6.71	6.79	6.59	6.71	6.55	6.67	6.47	---	---
15	6.67	6.55	6.75	6.63	6.79	6.67	6.71	6.55	6.67	6.55	---	---
16	6.63	6.51	6.79	6.67	6.75	6.63	6.75	6.59	6.67	6.47	---	---
17	6.67	6.55	6.83	6.63	6.71	6.55	6.79	6.63	6.71	6.55	---	---
18	6.71	6.47	6.75	6.63	6.63	6.47	6.83	6.63	6.75	6.63	---	---
19	6.75	6.55	6.79	6.71	6.59	6.51	6.94	6.71	6.75	6.67	---	---
20	6.75	6.59	6.90	6.67	6.63	6.47	6.79	6.63	6.75	6.63	---	---
21	6.75	6.63	6.79	6.71	6.62	6.50	6.86	6.63	6.79	6.63	---	---
22	6.75	6.63	6.83	6.63	6.65	6.52	6.94	6.75	6.75	6.63	---	---
23	6.75	6.63	6.86	6.75	6.63	6.46	6.94	6.75	6.90	6.71	---	---
24	6.71	6.55	6.86	6.71	6.60	6.35	6.94	6.55	7.10	6.71	---	---
25	6.67	6.51	6.83	6.59	6.54	6.36	6.75	6.51	6.94	6.71	---	---
26	6.67	6.39	6.83	6.63	6.55	6.34	6.75	6.55	6.90	6.79	---	---
27	6.71	6.43	6.83	6.75	6.52	6.31	6.86	6.63	6.90	6.79	---	---
28	6.75	6.63	6.90	6.71	6.53	6.44	6.83	6.67	6.90	6.75	---	---
29	6.83	6.63	6.86	6.71	6.52	6.31	6.79	6.67	6.94	6.83	---	---
30	6.83	6.59	6.90	6.71	6.59	6.32	6.75	6.67	6.98	6.71	---	---
31	---	---	6.90	6.75	---	---	6.79	6.67	---	---	---	---
MONTH	6.94	6.39	6.90	6.55	6.90	6.31	6.94	6.24	---	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.9	21.4	14.7	13.5	10.0	9.4	7.4	7.0	8.6	7.8	7.0	6.4
2	22.3	21.5	14.5	12.9	9.6	9.0	7.2	7.0	9.0	8.2	8.0	6.0
3	21.9	21.0	14.1	12.7	9.4	8.6	7.2	6.8	9.8	8.8	7.6	7.0
4	22.3	21.0	14.3	12.9	9.0	8.2	6.8	6.4	9.0	8.4	8.8	7.0
5	21.9	20.2	13.9	13.1	8.8	7.8	7.0	6.0	8.6	8.2	8.8	7.4
6	21.5	20.0	13.3	12.5	8.8	7.4	7.0	6.4	8.6	7.8	10.8	7.4
7	21.4	19.6	13.5	12.3	8.8	7.4	7.2	6.6	8.0	7.6	9.0	7.6
8	20.8	19.2	12.7	11.9	8.0	7.8	8.0	6.8	7.6	7.0	9.0	8.6
9	20.6	19.2	12.5	11.5	8.0	6.6	7.0	6.4	7.2	6.4	9.0	8.2
10	20.2	19.0	13.3	11.7	8.0	6.4	7.2	6.8	6.8	5.8	9.0	7.8
11	20.2	18.4	12.1	11.3	7.4	5.8	7.2	6.8	7.0	5.8	10.6	8.0
12	19.4	17.6	12.1	11.3	6.6	5.3	7.8	7.0	6.8	5.7	9.4	8.4
13	19.0	17.2	12.5	11.7	6.2	5.8	7.8	7.2	6.4	5.7	9.6	8.8
14	18.6	17.0	12.3	11.3	7.2	5.5	8.2	7.6	6.6	6.2	12.1	9.0
15	18.6	16.8	12.1	11.3	6.8	5.7	8.4	7.8	7.4	6.2	12.5	9.6
16	18.2	16.8	12.3	11.3	6.2	5.1	8.0	7.6	7.2	6.6	11.1	9.2
17	18.4	17.0	11.9	11.3	5.5	4.7	8.2	7.6	6.8	6.2	11.3	9.2
18	18.0	17.2	11.9	11.0	5.3	4.1	8.0	7.6	6.6	6.0	11.7	9.8
19	18.0	16.4	12.1	11.7	6.0	3.9	8.2	7.4	6.8	6.4	11.3	9.2
20	17.4	16.1	12.5	11.7	7.0	4.3	7.8	7.2	6.8	6.4	11.1	9.6
21	16.6	15.9	12.3	11.5	7.0	6.0	7.6	7.0	7.2	6.6	11.1	10.6
22	16.6	15.3	11.7	11.1	7.0	5.8	7.6	6.8	7.2	6.4	11.1	10.4
23	16.6	15.1	11.7	11.3	6.8	6.0	7.2	6.4	6.8	6.2	10.8	10.2
24	16.8	14.7	11.3	11.0	7.6	6.4	7.0	6.6	7.0	6.2	11.0	10.4
25	15.7	14.3	11.0	10.8	7.6	6.6	7.2	6.6	7.2	6.2	11.3	10.0
26	16.1	13.3	11.5	11.0	7.6	6.6	7.8	6.6	7.0	6.2	11.1	10.2
27	16.1	13.3	11.9	11.1	8.4	6.8	7.8	7.0	6.6	6.2	11.7	10.4
28	14.9	13.9	11.5	10.8	8.2	7.4	7.6	6.8	7.0	6.2	12.5	10.4
29	15.1	13.3	10.8	10.2	7.4	6.8	7.8	7.2	---	---	11.9	10.8
30	14.1	13.3	10.6	10.2	7.4	7.0	8.4	7.6	---	---	11.7	11.0
31	14.1	13.3	---	---	7.4	7.0	8.4	7.6	---	---	11.3	10.6
MONTH	22.9	13.3	14.7	10.2	10.0	3.9	8.4	6.0	9.8	5.7	12.5	6.0

03400800 MARTINS FORK NEAR SMITH, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.9	10.8	14.5	12.7	21.7	18.7	22.3	21.7	---	---	---	---
2	13.7	11.1	14.5	12.9	19.4	17.8	22.3	21.9	25.9	24.9	---	---
3	13.5	11.5	15.3	13.7	20.6	18.2	22.3	21.4	25.9	24.3	---	---
4	14.9	12.1	15.7	14.3	20.2	18.6	22.7	21.2	27.6	22.5	---	---
5	13.5	12.3	15.9	14.7	20.2	18.8	22.9	21.5	25.7	22.3	---	---
6	13.5	12.7	15.3	14.5	20.2	18.6	24.7	22.7	24.5	22.3	---	---
7	13.1	12.5	14.9	14.1	20.4	18.6	23.1	22.7	24.3	21.5	---	---
8	13.3	12.3	14.3	13.7	19.4	18.8	24.3	22.7	24.7	21.2	---	---
9	12.9	11.3	13.7	13.3	20.6	19.0	24.5	22.3	24.7	21.2	---	---
10	11.9	11.0	13.7	13.3	20.2	18.6	24.5	22.9	24.9	21.0	---	---
11	11.9	11.0	13.9	13.1	19.6	18.8	24.9	23.5	24.5	21.0	---	---
12	12.5	11.1	14.3	13.3	20.4	19.0	24.9	23.7	25.1	21.4	---	---
13	12.1	11.0	15.1	13.7	20.6	19.2	25.5	23.5	25.1	21.4	27.6	22.7
14	12.1	11.1	14.5	13.7	21.5	20.0	25.5	23.3	25.3	21.5	---	---
15	11.9	11.3	15.1	13.7	21.0	19.2	26.1	23.3	23.5	21.7	---	---
16	12.7	11.3	15.1	14.3	19.2	18.4	25.1	23.7	25.3	21.5	---	---
17	13.1	11.1	16.1	14.5	18.4	17.6	26.1	23.5	24.7	21.9	---	---
18	13.1	11.5	16.4	14.9	18.0	17.4	25.7	22.9	24.1	21.9	---	---
19	14.3	11.3	16.1	15.3	18.6	17.6	24.5	22.9	25.1	21.7	---	---
20	16.3	11.3	17.8	15.3	18.6	17.6	---	---	24.7	21.5	---	---
21	16.1	11.1	16.8	15.5	19.0	17.6	---	---	24.9	22.1	---	---
22	15.7	11.3	17.4	15.7	19.0	18.4	---	---	25.5	22.3	---	---
23	13.7	12.3	17.0	16.1	19.4	18.8	---	---	24.1	22.5	---	---
24	13.9	12.1	17.6	15.9	19.8	19.0	---	---	24.1	22.5	---	---
25	17.2	12.5	19.6	16.4	20.0	19.2	---	---	26.1	22.3	---	---
26	17.2	12.9	20.0	16.6	21.0	19.6	---	---	25.7	24.7	---	---
27	17.2	12.7	18.8	17.4	21.5	20.4	---	---	25.5	24.7	---	---
28	16.3	12.5	19.2	17.6	21.4	20.6	---	---	25.7	24.7	---	---
29	14.7	13.1	21.5	18.0	22.5	20.8	---	---	26.3	25.1	20.8	16.8
30	17.4	12.9	21.7	18.6	22.9	21.2	---	---	26.1	23.3	20.6	20.0
31	---	---	22.7	19.0	---	---	---	---	---	---	---	---
MONTH	17.4	10.8	22.7	12.7	22.9	17.4	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.5	10.1	9.7	10.7	10.5	11.9	11.7	12.0	11.8	12.2	12.1
2	8.0	7.6	10.1	9.8	10.8	10.7	11.9	11.7	11.8	11.5	12.3	11.8
3	8.1	7.7	10.2	9.6	10.9	10.6	12.0	11.7	11.5	11.3	12.2	11.9
4	8.3	7.8	9.8	9.4	10.9	10.6	12.1	11.9	11.6	11.4	12.2	11.8
5	8.5	8.0	9.7	9.3	11.1	10.7	12.0	11.8	11.6	11.4	12.0	11.7
6	8.7	8.3	9.8	9.4	11.2	10.8	12.0	11.8	11.7	11.5	11.9	11.1
7	8.7	8.3	10.2	9.7	11.3	10.9	12.0	11.8	11.7	11.5	11.8	11.5
8	8.7	8.3	10.3	10.2	11.4	11.2	12.1	11.8	11.8	11.7	11.6	11.5
9	8.8	8.5	10.5	10.3	11.7	11.3	12.1	12.0	11.9	11.8	11.8	11.7
10	8.9	8.6	10.4	10.1	11.6	11.2	12.3	12.0	12.1	11.8	11.7	11.5
11	8.9	8.6	10.5	10.3	11.7	11.2	12.2	12.0	12.2	11.9	11.5	11.1
12	9.1	8.8	10.5	10.4	11.9	11.5	12.1	11.9	12.2	11.9	11.5	11.1
13	9.3	8.9	10.6	10.3	12.1	11.8	12.1	11.9	12.2	12.1	11.4	11.1
14	9.3	9.0	10.6	10.5	12.2	11.7	12.0	11.8	12.3	12.1	11.2	10.6
15	9.3	9.0	10.7	10.5	12.1	11.7	11.9	11.8	12.3	12.2	11.0	10.6
16	9.4	9.0	10.6	10.5	12.1	11.7	12.2	11.9	12.2	12.2	11.1	11.0
17	9.4	9.0	10.8	10.6	12.2	11.8	12.0	11.9	12.2	12.1	11.2	10.6
18	9.4	9.0	10.9	10.7	12.4	12.0	11.9	11.9	12.2	11.9	10.9	10.4
19	9.5	9.1	10.8	10.6	12.4	12.1	12.0	11.9	12.0	11.8	11.1	10.7
20	9.6	9.2	10.7	10.4	12.5	11.9	12.1	11.9	11.9	11.8	10.8	10.5
21	9.4	9.0	10.8	10.5	12.1	11.8	12.2	11.9	11.8	11.7	10.7	10.5
22	9.4	9.0	10.8	10.6	12.2	11.7	12.2	12.1	11.9	11.7	10.8	10.6
23	9.7	9.0	10.8	10.4	12.2	11.8	12.3	12.1	12.1	11.8	11.0	10.7
24	9.5	9.1	10.7	10.5	11.9	11.6	12.3	12.1	12.2	12.0	11.0	10.8
25	9.8	9.3	10.7	10.6	12.1	11.8	12.3	12.1	12.2	12.0	11.1	10.8
26	9.9	9.4	10.7	10.4	12.1	11.7	12.3	12.1	12.2	12.0	11.1	10.9
27	10.1	9.5	10.4	10.2	11.9	11.6	12.3	12.1	12.2	12.0	11.0	10.9
28	10.0	9.5	10.6	10.2	11.8	11.5	12.3	12.0	12.2	12.1	11.1	10.7
29	10.1	9.8	10.7	10.6	11.8	11.7	12.3	12.1	---	---	10.9	10.7
30	10.1	9.8	10.6	10.4	11.8	11.7	12.1	12.0	---	---	10.8	10.6
31	10.1	9.8	---	---	11.9	11.6	12.1	11.8	---	---	10.7	10.5
MONTH	10.1	7.5	10.9	9.3	12.5	10.5	12.3	11.7	12.3	11.3	12.3	10.4

03400800 MARTINS FORK NEAR SMITH, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.7	10.5	10.8	9.9	9.6	9.1	8.5	8.1	---	---	---	---
2	10.7	10.0	10.8	10.5	9.8	9.3	8.5	8.2	8.8	8.5	---	---
3	10.5	10.2	10.6	10.1	9.6	9.1	9.6	8.2	8.7	8.5	---	---
4	10.4	9.9	10.2	9.9	9.5	9.0	9.5	9.3	8.6	7.9	---	---
5	10.4	10.2	10.1	9.8	9.3	8.9	9.5	8.5	8.4	8.0	---	---
6	10.3	10.1	10.5	10.0	9.6	9.1	8.7	8.1	8.6	8.0	---	---
7	10.4	10.2	10.7	10.4	9.9	9.3	8.9	8.5	8.5	8.0	---	---
8	10.4	10.1	10.8	10.5	9.8	9.6	9.0	8.4	8.5	8.0	---	---
9	10.7	10.3	10.6	10.5	9.6	9.3	9.2	8.8	8.7	8.1	---	---
10	10.9	10.6	10.6	10.5	9.8	9.3	9.3	8.9	8.6	8.1	---	---
11	11.0	10.7	10.7	10.4	9.7	9.6	9.4	8.7	8.6	8.1	---	---
12	11.0	10.7	10.7	10.5	9.7	9.4	9.4	8.4	8.6	8.0	---	---
13	11.0	10.8	10.7	10.4	9.6	9.3	9.0	8.4	8.6	8.0	8.9	8.2
14	11.1	10.8	10.6	10.5	9.5	9.2	9.1	8.4	8.5	7.8	---	---
15	11.1	10.8	10.7	10.3	9.5	9.2	9.1	8.2	8.3	7.6	---	---
16	11.1	10.9	10.4	10.2	9.9	9.4	8.8	8.2	8.3	7.5	---	---
17	11.2	10.8	10.4	10.2	10.3	9.8	8.7	8.0	8.2	7.5	---	---
18	11.0	10.4	10.4	10.0	10.3	10.0	8.5	7.9	8.4	7.5	---	---
19	10.7	10.3	10.2	10.0	10.1	9.6	---	---	8.4	7.5	---	---
20	10.4	10.0	10.1	9.7	10.0	9.6	---	---	8.3	7.3	---	---
21	10.5	10.0	10.1	9.9	10.0	9.6	---	---	8.2	7.4	---	---
22	10.5	10.0	10.2	9.9	9.7	9.5	---	---	8.2	7.4	---	---
23	10.5	10.0	10.1	9.8	9.8	9.5	---	---	8.0	7.3	---	---
24	10.4	9.9	10.1	9.7	9.9	9.6	---	---	7.9	7.2	---	---
25	10.4	9.8	10.0	9.6	9.8	9.6	---	---	8.1	7.2	---	---
26	10.3	9.8	10.0	9.5	9.8	9.3	---	---	8.1	7.8	---	---
27	10.5	10.0	9.9	9.6	9.5	9.1	---	---	8.1	7.8	---	---
28	10.6	10.0	9.8	9.6	9.2	9.0	---	---	7.9	7.7	---	---
29	10.7	9.9	9.7	9.3	9.1	8.9	---	---	7.8	7.6	10.2	9.1
30	10.9	9.9	9.8	9.3	8.9	8.2	---	---	8.1	7.6	9.2	9.0
31	---	---	9.6	9.0	---	---	---	---	---	---	---	---
MONTH	11.2	9.8	10.8	9.0	10.3	8.2	---	---	---	---	---	---

03400990 CLOVER FORK AT HARLAN, KY

LOCATION.--Lat 36°50'51", long 83°19'32", Harlan County, Hydrologic Unit 05130101, on right bank on U.S. Highway 421, 60 ft upstream from bridge on Central Street, 800 ft downstream from Martins Fork, 1.4 mi upstream from Poor Fork, and at mile 1.4.

DRAINAGE AREA.--222 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,155.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 10-15, 18, 19, Jan. 22 to Feb. 2, 7-15, 23-28. Water-discharge records good except for estimated daily discharges, which are poor. Flow regulated by Martins Fork Dam (station 0340079[illegible]) beginning January 1979.

AVERAGE DISCHARGE.--12 years, 391 ft^3/s, 23.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft^3/s, May 7, 1984, gage height, 20.09 ft; minimum daily, 13 ft^3/s, Oct. 23, 24, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 4, 1977, reached a stage of 29.4 ft present datum, from floodmarks, discharge, 44,000 ft^3/s from contracted opening study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,200 ft^3/s, Jan. 12, gage height, 10.02 ft; minimum daily discharge, 46 ft^3/s, Oct. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	62	414	405	270	598	742	814	204	531	207	441
2	68	62	359	416	250	536	636	1140	215	415	238	336
3	69	60	263	408	289	566	641	914	185	350	173	236
4	67	62	245	380	449	481	1210	758	177	380	152	191
5	63	326	213	384	440	535	1380	2880	227	372	102	162
6	62	411	142	728	462	2980	1080	3160	717	318	104	150
7	62	252	135	737	600	1370	925	1810	887	402	95	144
8	62	237	155	871	520	990	888	1300	624	420	86	130
9	62	212	161	801	460	834	912	1200	1100	357	79	121
10	62	217	144	709	390	712	820	1180	895	283	75	142
11	62	239	120	617	350	586	735	994	666	235	71	141
12	59	215	92	3330	330	549	665	904	714	247	71	120
13	57	218	110	3150	300	519	597	762	1260	229	69	110
14	56	207	120	1610	430	480	472	694	1210	179	68	134
15	56	197	92	2480	530	447	458	676	3740	152	69	769
16	55	225	84	1590	635	370	419	531	4170	140	70	2540
17	56	475	80	1160	721	310	386	478	3410	133	67	1080
18	51	377	75	1000	766	434	366	429	2250	119	102	787
19	60	409	70	891	715	504	305	414	1580	136	127	596
20	57	1010	77	750	850	524	266	616	1010	146	83	376
21	70	798	191	570	3180	1560	244	566	864	114	77	263
22	72	633	406	500	1910	1170	233	502	604	141	75	586
23	56	454	542	450	1500	876	223	620	618	137	119	864
24	56	407	1360	400	1000	779	212	551	616	126	478	599
25	56	362	1410	380	860	689	211	533	558	88	383	497
26	51	330	756	350	750	632	192	489	536	80	884	758
27	46	410	596	310	710	572	318	428	467	105	527	635
28	53	475	558	280	655	446	298	379	448	156	354	522
29	62	420	505	260	---	420	467	348	361	141	284	342
30	65	440	401	280	---	443	542	316	292	115	1470	450
31	63	---	379	290	---	648	---	230	---	136	669	---
TOTAL	1872	10202	10255	26487	20322	22560	16843	26616	30605	6883	7428	14222
MEAN	60.4	340	331	854	726	728	561	859	1020	222	240	474
MAX	76	1010	1410	3330	3180	2980	1380	3160	4170	531	1470	2540
MIN	46	60	70	260	250	310	192	230	177	80	67	110
CFSM	.27	1.53	1.49	3.85	3.27	3.28	2.53	3.87	4.60	1.00	1.08	2.14
IN.	.31	1.71	1.72	4.44	3.41	3.78	2.82	4.46	5.13	1.15	1.24	2.38

CAL YR 1988 TOTAL 95798 MEAN 262 MAX 4400 MIN 27 CFSM 1.18 IN. 16.05
WTR YR 1989 TOTAL 194295 MEAN 532 MAX 4170 MIN 46 CFSM 2.40 IN. 32.56

03400990 CLOVER FORK AT HARLAN, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1980 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: January 1980 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,330 mg/L, May 7, 1984; minimum daily mean, 0 mg/L, Feb. 28, July 2, 16, 1988 and Oct. 20, 1988.
SEDIMENT LOADS: Maximum daily, 175,000 tons, May 7, 1984; minimum daily, 0.01 ton, July 2, 1988.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,110 mg/L, Aug. 24; minimum daily mean, 0 mg/L, Oct. 20.
SEDIMENT LOADS: Maximum daily, 22,300 tons, Jan. 12; minimum daily, 0.07 ton, Oct. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
03...	1330	67	544	17.5	6	1.1	66
NOV							
14...	1420	205	330	14.5	6	3.3	62
JAN							
04...	1200	386	--	3.5	5	5.2	67
FEB							
28...	1100	680	257	6.0	16	29	61
APR							
05...	1050	1440	236	12.5	76	295	73
MAY							
17...	1040	492	304	18.0	11	15	66
JUL							
07...	1045	356	389	--	191	184	92
AUG							
09...	1215	79	598	21.5	40	8.5	89

03400990 CLOVER FORK AT HARLAN, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	76	6	1.3	62	1	.23	414	7	8.2
2	68	7	1.3	62	1	.23	359	6	5.8
3	69	6	1.1	60	1	.21	263	5	3.8
4	67	5	.92	62	2	.37	245	5	3.3
5	63	5	.78	326	243	283	213	5	2.7
6	62	4	.62	411	141	176	142	4	1.5
7	62	3	.52	252	16	11	135	3	1.3
8	62	2	.38	237	22	14	155	6	2.5
9	62	2	.25	212	13	7.7	161	6	2.8
10	62	1	.20	217	13	7.6	144	6	2.2
11	62	1	.15	239	12	7.6	120	5	1.5
12	59	1	.12	215	9	5.1	92	4	1.0
13	57	1	.13	218	8	4.9	110	5	1.5
14	56	1	.21	207	7	4.0	120	4	1.3
15	56	1	.20	197	6	3.0	92	3	.84
16	55	2	.34	225	19	16	84	3	.70
17	56	3	.39	475	155	205	80	3	.62
18	51	1	.19	377	40	40	75	4	.77
19	60	2	.27	409	81	103	70	3	.65
20	57	0	.07	1010	563	1750	77	3	.63
21	70	5	.99	798	94	209	191	90	90
22	72	3	.61	633	44	75	406	101	116
23	56	3	.40	454	26	31	542	253	385
24	56	3	.42	407	19	21	1360	797	4650
25	56	2	.34	362	17	17	1410	217	923
26	51	2	.28	330	16	15	756	78	161
27	46	2	.20	410	21	24	596	43	69
28	53	3	.44	475	23	29	558	35	52
29	62	5	.87	420	16	18	505	29	39
30	65	3	.55	440	10	12	401	20	22
31	63	2	.33	---	---	---	379	12	13
TOTAL	1872	---	14.87	10202	---	3089.94	10255	---	6563.61
		JANUARY			FEBRUARY			MARCH	
1	405	15	17	270	7	5.2	598	18	29
2	416	13	15	250	6	4.3	536	24	36
3	408	12	13	289	15	15	566	25	39
4	380	11	11	449	30	36	481	18	23
5	384	12	13	440	11	13	535	47	74
6	728	264	600	462	10	12	2980	485	4590
7	737	105	216	600	28	45	1370	64	248
8	871	156	388	520	13	18	990	39	104
9	801	54	118	460	8	10	834	34	77
10	709	33	64	390	6	6.0	712	29	56
11	617	44	78	350	5	4.3	586	22	34
12	3330	1770	22300	330	4	3.6	549	17	26
13	3150	453	4370	300	14	11	519	16	22
14	1610	167	738	430	569	661	480	15	19
15	2480	247	1700	530	368	526	447	13	16
16	1590	100	429	635	29	50	370	6	6.4
17	1160	74	233	721	36	71	310	4	3.6
18	1000	57	153	766	30	62	434	926	1080
19	891	44	106	715	19	37	504	96	130
20	750	30	61	850	135	406	524	127	180
21	570	21	32	3180	825	7910	1560	290	1270
22	500	17	23	1910	98	551	1170	72	231
23	450	17	21	1500	54	218	876	46	108
24	400	24	26	1000	51	138	779	28	59
25	380	22	23	860	29	67	689	17	31
26	350	21	19	750	24	49	632	12	21
27	310	16	13	710	23	43	572	9	14
28	280	9	7.1	655	21	37	446	3	3.7
29	260	8	5.4	---	---	---	420	2	2.4
30	280	12	9.2	---	---	---	443	16	20
31	290	9	6.7	---	---	---	648	161	301
TOTAL	26487	---	31808.4	20322	---	11009.4	22560	---	8854.1

03400990 CLOVER FORK AT HARLAN, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	742	51	105	814	313	687	204	1	.61
2	636	7	12	1140	140	446	215	14	8.3
3	641	10	18	914	59	146	185	8	4.1
4	1210	280	1130	758	36	75	177	8	3.9
5	1380	105	408	2880	831	6460	227	70	68
6	1080	45	131	3160	450	4150	717	368	713
7	925	37	93	1810	144	719	887	106	269
8	888	41	101	1300	89	314	624	57	97
9	912	23	56	1200	86	280	1100	396	1460
10	820	15	33	1180	65	205	895	80	207
11	735	12	25	994	36	97	666	20	36
12	665	12	21	904	37	90	714	95	275
13	597	11	17	762	23	46	1260	221	793
14	472	6	8.2	694	18	34	1210	171	710
15	458	3	4.1	676	22	41	3740	1110	13300
16	419	2	2.0	531	16	22	4170	680	8080
17	386	2	1.8	478	9	12	3410	379	3590
18	366	3	2.5	429	6	7.3	2250	219	1330
19	305	2	1.9	414	7	7.4	1580	158	727
20	266	2	1.1	616	120	235	1010	96	267
21	244	1	.61	566	32	50	864	52	123
22	233	1	.55	502	40	61	604	25	41
23	223	1	.61	620	98	168	618	25	42
24	212	1	.69	551	13	20	616	25	42
25	211	1	.79	533	15	22	558	23	34
26	192	1	.76	489	11	14	536	38	65
27	318	122	105	428	16	19	467	34	44
28	298	56	45	379	6	6.7	448	52	63
29	467	231	322	348	4	4.2	361	40	39
30	542	90	133	316	3	2.7	292	29	23
31	---	---	---	230	2	1.0	---	---	---
TOTAL	16843	---	2780.61	26616	---	14442.3	30605	---	32454.91
		JULY			AUGUST			SEPTEMBER	
1	531	978	1660	207	154	87	441	51	64
2	415	110	137	238	63	43	336	50	48
3	350	23	22	173	23	11	236	14	8.9
4	380	49	53	152	21	8.7	191	6	2.9
5	372	56	56	102	14	3.8	162	3	1.4
6	318	42	36	104	45	13	150	6	2.4
7	402	182	219	95	22	5.7	144	9	3.4
8	420	79	92	86	9	2.1	130	6	2.3
9	357	50	48	79	9	2.0	121	4	1.3
10	283	35	26	75	5	.93	142	6	3.2
11	235	29	18	71	3	.65	141	2	.93
12	247	33	24	71	3	.50	120	1	.37
13	229	10	6.6	69	2	.41	110	1	.21
14	179	6	3.1	68	1	.23	134	64	30
15	152	2	.94	69	1	.20	769	387	2580
16	140	2	.61	70	1	.25	2540	712	5740
17	133	1	.27	67	76	38	1080	150	448
18	119	1	.26	102	730	232	787	89	190
19	136	42	21	127	599	246	596	62	103
20	146	82	33	83	294	66	376	27	28
21	114	30	9.4	77	59	12	263	13	9.3
22	141	19	7.1	75	17	3.4	586	188	401
23	137	9	3.3	119	316	211	864	118	290
24	126	6	2.0	478	2110	3640	599	21	35
25	88	2	.49	383	1120	2660	497	25	38
26	80	1	.29	884	1380	3750	758	81	168
27	105	25	15	527	163	245	635	28	47
28	156	24	11	354	64	62	522	17	24
29	141	34	14	284	28	22	342	8	7.1
30	115	22	6.9	1470	823	5490	450	41	71
31	136	51	28	669	89	176	---	---	---
TOTAL	6883	---	2554.26	7428	---	17032.87	14222	---	10348.71
YEAR	194295		140953.98						

03401000 CUMBERLAND RIVER NEAR HARLAN, KY

LOCATION.--Lat 36°50'48", long 83°21'21", Harlan County, Hydrologic Unit 05130101, on left bank 10 ft downstream from bridge on State Highway 840 at Loyall, 1.6 mi upstream from Fourmile Branch, 1.8 mi west of Harlan, 2.3 mi downstream from confluence of Poor and Clover Forks, and at mile 691.9.

DRAINAGE AREA.--374 mi^2.

PERIOD OF RECORD.--March 1940 to current year.

REVISED RECORDS.--WSP 953: 1940(M). WSP 1173: 1947(M).

GAGE.--Water-stage recorder. Datum of gage is 1,140.10 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1941, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated by Martins Fork Dam (station 03400798) beginning January 1979. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 677 ft^3/s, 24.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,500 ft^3/s, Apr. 5, 1977, gage height, 30.20 ft from rating curve extended above 25,000 ft^3/s on basis of contracted-opening measurement of peak flow; minimum, 3.0 ft^3/s, Oct. 9, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1918 and 1929 reached a stage of about 22 ft and 20.0 ft respectively, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base discharge of 8,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	2200	8,600	10.07	June 16	0100	8,790	10.20
May 5	2300	*9,560	*10.71				

Minimum discharge, 59 ft^3/s, Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	88	492	643	405	926	1180	1570	381	746	469	746
2	97	87	430	676	393	836	1040	2710	405	654	485	588
3	91	82	337	670	451	867	1030	1870	359	554	359	408
4	85	82	314	616	1070	756	1760	1370	337	619	293	329
5	80	400	282	587	935	820	2190	3600	387	655	210	275
6	75	680	213	1150	864	5130	1670	5950	1110	616	246	251
7	72	433	196	1290	980	2870	1410	3480	2540	1100	284	243
8	71	361	208	1430	878	1820	1330	2380	1390	1020	220	217
9	70	312	217	1390	750	1390	1380	2010	2560	774	181	199
10	70	309	170	1170	655	1150	1240	1930	2210	560	153	211
11	68	344	150	995	549	923	1100	1680	1360	465	133	223
12	66	310	129	4100	503	833	970	1510	1250	540	120	189
13	63	313	165	5190	486	777	856	1250	2420	550	113	212
14	60	298	180	2850	671	729	684	1090	2110	420	107	231
15	61	269	140	4080	905	670	681	1050	5840	342	109	873
16	61	289	128	2750	1070	563	625	848	6990	304	109	4150
17	63	695	117	1840	1360	477	575	751	5980	280	100	1960
18	67	593	108	1450	1390	599	545	670	3620	243	161	1270
19	70	584	102	1230	1210	744	481	628	2430	240	256	958
20	70	1550	114	1020	1380	766	435	960	1630	267	151	600
21	93	1430	216	772	4990	2110	409	932	1350	224	129	427
22	102	981	625	699	3870	2020	386	789	973	245	119	1250
23	82	672	869	649	2300	1480	368	974	955	233	153	2430
24	86	575	2070	609	1680	1310	354	872	935	214	658	1520
25	88	499	2940	577	1300	1160	358	813	832	161	561	1050
26	75	440	1430	550	1180	1030	325	738	764	142	1200	1430
27	65	543	1010	520	1120	897	781	709	732	198	753	1270
28	74	717	869	417	1020	697	745	639	754	389	476	1010
29	85	653	791	400	---	637	878	583	595	312	375	670
30	89	563	632	431	---	653	1070	523	481	237	2360	731
31	88	---	611	434	---	939	---	423	---	345	1310	---
TOTAL	2385	15152	16255	41185	34365	36579	26856	45302	53680	13649	12373	25921
MEAN	76.9	505	524	1329	1227	1180	895	1461	1789	440	399	864
MAX	102	1550	2940	5190	4990	5130	2190	5950	6990	1100	2380	4150
MIN	60	82	102	400	393	477	325	423	337	142	100	189
CFSM	.21	1.35	1.40	3.55	3.28	3.15	2.39	3.91	4.78	1.18	1.07	2.31
IN.	.24	1.51	1.62	4.10	3.42	3.64	2.67	4.51	5.34	1.36	1.23	2.58

CAL YR 1988 TOTAL 137646 MEAN 376 MAX 5910 MIN 29 CFSM 1.01 IN. 13.69
WTR YR 1989 TOTAL 323702 MEAN 887 MAX 6990 MIN 60 CFSM 2.37 IN. 32.20

03401428 BENNETTS FORK AT MIDDLESBORO, KY

LOCATION.--Lat 36°36'06", long 83°45'06", Bell County Hydrologic Unit 05130101, on left bank 50 ft upstream from Davis Grocery on State Highway 186 west in Middlesboro.

DRAINAGE AREA.--13.0 mi^2

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,166.826 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Water-discharge records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,380 ft^3/s, Nov. 9, 1986, gage height, 4.37 ft; minimum daily discharge, 0.96 ft^3/s, Aug. 1, 2, 25, 26, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 1,340 ft^3/s, June 15, gage height, 4.02 ft; minimum daily discharge, 2.7 ft^3/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.8	19	38	28	45	37	35	15	21	11	5.7
2	5.3	4.5	17	35	27	42	35	31	15	21	9.5	5.9
3	4.2	4.5	16	32	29	39	37	24	15	25	7.8	5.0
4	3.8	7.4	16	27	29	36	102	23	14	23	6.6	4.9
5	3.5	71	14	26	32	59	88	95	18	19	6.3	4.1
6	3.3	36	13	63	37	320	59	127	38	18	7.5	4.4
7	3.3	17	12	58	40	121	50	77	29	17	6.5	4.3
8	3.2	11	12	142	37	79	49	53	24	16	5.3	4.0
9	3.1	8.3	11	89	34	62	44	53	77	16	4.8	4.0
10	2.9	17	11	63	35	53	40	46	46	13	4.6	4.1
11	2.8	16	11	65	32	46	36	40	30	13	4.9	4.2
12	2.7	12	12	424	31	42	33	35	29	13	5.0	4.1
13	2.8	10	10	240	30	38	30	31	30	11	5.0	3.6
14	3.1	8.2	10	146	74	35	29	29	25	10	4.8	3.9
15	3.1	7.0	9.7	194	81	32	31	39	234	9.9	5.5	11
16	3.1	8.7	9.0	119	75	29	27	29	228	10	4.9	13
17	3.3	13	8.8	88	87	27	24	27	92	9.8	5.8	6.2
18	3.4	9.9	9.8	71	92	29	23	24	62	8.5	9.3	4.4
19	3.3	45	9.1	62	76	26	22	24	48	8.1	5.8	4.3
20	3.1	226	7.9	55	113	28	20	36	44	7.7	5.4	3.9
21	6.9	61	24	49	386	55	20	28	36	8.0	5.3	3.7
22	5.6	34	23	45	151	40	20	27	60	8.0	5.4	16
23	4.6	23	44	42	97	37	20	28	58	7.2	7.0	27
24	6.2	20	181	39	74	37	20	24	49	6.8	17	12
25	4.8	18	104	36	63	37	18	21	38	6.1	10	11
26	4.5	16	52	34	59	36	16	22	30	5.6	12	24
27	4.4	24	37	33	54	32	16	30	26	7.1	8.4	12
28	6.3	40	38	31	50	31	20	24	34	8.2	6.6	9.4
29	5.6	32	32	30	---	29	20	20	27	6.8	6.5	9.5
30	5.1	25	29	33	---	30	20	18	22	7.7	7.8	37
31	5.0	---	30	30	---	42	---	17	---	8.1	5.9	---
TOTAL	126.5	830.3	832.3	2439	1953	1594	1006	1137	1493	369.6	218.2	266.6
MEAN	4.08	27.7	26.8	78.7	69.7	51.4	33.5	36.7	49.8	11.9	7.04	8.89
MAX	6.9	226	181	424	386	320	102	127	234	25	17	37
MIN	2.7	4.5	7.9	26	27	26	16	17	14	5.6	4.6	3.6

CAL YR 1988 TOTAL 6002.3 MEAN 16.4 MAX 301 MIN 1.6
WTR YR 1989 TOTAL 12265.5 MEAN 33.6 MAX 424 MIN 2.7

03401428 BENNETTS FORK AT MIDDLESBORO, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to September 1989 (discontinued).

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: November 1985 to current year.

INSTRUMENTATION.--Sediment pumping sampler since Nov. 8, 1985.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,490 mg/L, Feb 17, 1986; minimum daily mean, 0 mg/L, many days in 1986-89.
SEDIMENT LOADS: Maximum daily, 6,740 tons, Feb 17, 1986; minimum daily, 0 ton on many days in 1987-89.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,050 mg/L, Jan. 12; minimum daily mean, 0 mg/L, Oct. 14-16, April 18, and Sept. 4.
SEDIMENT LOADS: Maximum daily, 3,500 tons, June 15; minimum daily, 0 ton, Oct. 14-16, and Sept. 4.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT									
03...	1325	3.9	730	17.0	0	0.0	--	--	--
NOV									
10...	1505	41	--	14.0	176	20	46	65	--
14...	1315	7.6	640	10.0	7	0.14	--	--	--
20...	0900	732	--	13.0	2270	4490	24	37	52
DEC									
21...	1100	15	--	--	653	26	49	69	86
23...	1100	56	--	--	84	13	33	50	--
JAN									
04...	1415	27	520	5.0	7	0.51	--	--	--
FEB									
20...	1650	169	--	--	222	101	35	50	--
21...	1200	466	205	9.5	561	706	--	--	--
21...	1240	466	205	9.5	485	610	23	38	53
APR									
04...	1145	153	--	--	291	120	26	47	68
12...	1620	31	560	10.0	6	0.50	--	--	--
MAY									
06...	1100	130	--	11.5	265	93	35	48	68
16...	1430	28	575	15.0	12	0.92	--	--	--
JUN									
09...	1000	118	--	17.0	439	140	32	46	64
15...	2030	1330	--	--	13700	49200	25	39	55
27...	1435	26	601	20.0	6	0.42	--	--	--
AUG									
10...	1405	4.7	776	22.5	5	0.06	--	--	--

03401428 BENNETTS FORK AT MIDDLESBORO, KY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT									
03...	--	--	--	--	--	--	100	--	--
NOV									
10...	88	--	97	99	100	--	--	--	--
14...	--	--	--	--	--	--	35	--	--
20...	68	80	91	96	100	--	--	--	--
DEC									
21...	95	98	--	--	--	--	100	--	--
23...	87	--	--	--	--	--	97	--	--
JAN									
04...	--	--	--	--	--	--	44	--	--
FEB									
20...	82	--	97	99	100	--	--	--	--
21...	--	--	--	--	--	--	77	--	--
21...	66	79	89	94	97	98	--	98	99
APR									
04...	83	96	97	99	100	--	--	--	--
12...	--	--	--	--	--	--	64	--	--
MAY									
06...	81	93	96	99	100	--	--	--	--
16...	--	--	--	--	--	--	64	--	--
JUN									
09...	80	93	98	99	100	--	--	--	--
15...	72	83	90	97	99	100	--	--	--
27...	--	--	--	--	--	--	87	--	--
AUG									
10...	--	--	--	--	--	--	32	--	--

03401428 BENNETTS FORK AT MIDDLESBORO, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	4.2	3	.04	4.8	3	.04	19	3	.18
2	5.3	18	.28	4.5	2	.03	17	4	.17
3	4.2	23	.25	4.5	2	.02	16	9	.40
4	3.8	15	.15	7.4	63	4.2	16	10	.42
5	3.5	5	.05	71	317	84	14	3	.12
6	3.3	8	.07	36	19	2.0	13	3	.11
7	3.3	14	.13	17	9	.41	12	1	.04
8	3.2	9	.08	11	7	.22	12	8	.27
9	3.1	5	.04	8.3	6	.13	11	2	.06
10	2.9	3	.02	17	82	5.9	11	1	.04
11	2.8	3	.02	16	34	1.5	11	1	.03
12	2.7	2	.02	12	15	.49	12	4	.15
13	2.8	1	.01	10	9	.26	10	1	.02
14	3.1	0	.00	8.2	4	.10	10	3	.07
15	3.1	0	.00	7.0	3	.06	9.7	5	.12
16	3.1	0	.00	8.7	77	3.6	9.0	4	.09
17	3.3	28	.26	13	128	4.7	8.8	1	.01
18	3.4	2	.02	9.9	13	.36	9.8	22	.65
19	3.3	2	.02	45	255	64	9.1	17	.43
20	3.1	6	.06	226	842	794	7.9	7	.15
21	6.9	296	6.3	61	83	15	24	556	61
22	5.6	3	.05	34	24	2.3	23	189	12
23	4.6	14	.24	23	9	.55	44	132	15
24	6.2	22	.39	20	7	.39	181	624	649
25	4.8	6	.07	18	6	.30	104	110	34
26	4.5	2	.03	16	5	.20	52	37	5.2
27	4.4	4	.05	24	63	5.3	37	19	1.9
28	6.3	22	.37	40	46	5.0	38	39	4.6
29	5.6	5	.08	32	12	1.1	32	7	.62
30	5.1	4	.06	25	6	.41	29	6	.51
31	5.0	4	.05	---	---	---	30	14	1.3
TOTAL	126.5	---	9.21	830.3	---	996.57	832.3	---	788.66
		JANUARY			FEBRUARY			MARCH	
1	38	15	1.6	28	20	1.5	45	22	2.7
2	35	4	.35	27	14	1.0	42	26	2.9
3	32	3	.24	29	120	10	39	19	2.1
4	27	2	.14	29	23	1.8	36	16	1.6
5	26	3	.19	32	202	18	59	274	106
6	63	133	24	37	101	10	320	719	810
7	58	30	4.7	40	19	2.0	121	68	23
8	142	400	201	37	12	1.2	79	21	4.5
9	89	50	12	34	11	1.0	62	9	1.5
10	63	46	7.8	35	21	2.1	53	8	1.1
11	65	129	35	32	8	.65	46	6	.77
12	424	2050	2690	31	4	.32	42	5	.58
13	240	236	173	30	2	.16	38	4	.41
14	146	84	42	74	1190	294	35	3	.27
15	194	77	44	81	58	13	32	2	.19
16	119	24	7.7	75	111	23	29	2	.13
17	88	13	3.1	87	103	25	27	1	.07
18	71	8	1.6	92	23	5.6	29	16	1.4
19	62	7	1.1	76	15	3.2	26	4	.30
20	55	6	.87	113	151	59	28	14	1.2
21	49	5	.70	386	1090	1590	55	76	12
22	45	5	.57	151	215	89	40	14	1.5
23	42	4	.45	97	63	17	37	8	.94
24	39	4	.38	74	49	9.7	37	7	.68
25	36	3	.31	63	34	5.8	37	4	.41
26	34	3	.26	59	40	6.3	36	3	.33
27	33	3	.23	54	27	3.9	32	3	.27
28	31	2	.19	50	27	3.6	31	3	.23
29	30	2	.16	---	---	---	29	3	.21
30	33	162	15	---	---	---	30	7	.63
31	30	32	2.6	---	---	---	42	69	9.1
TOTAL	2439	---	3271.24	1953	---	2197.83	1594	---	987.02

CUMBERLAND RIVER BASIN

03401428 BENNETTS FORK AT MIDDLESBORO, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	37	10	1.0	35	180	20	15	2	.10
2	35	5	.44	31	33	2.8	15	3	.12
3	37	22	2.3	24	19	1.3	15	1	.05
4	102	196	66	23	34	2.3	14	2	.07
5	88	24	6.0	95	412	184	18	111	12
6	59	9	1.4	127	67	24	38	520	64
7	50	6	.83	77	52	11	29	73	6.1
8	49	53	7.6	53	42	6.3	24	79	7.7
9	44	13	1.6	53	26	4.0	77	1880	487
10	40	9	.93	46	14	1.7	46	65	8.9
11	36	7	.72	40	10	1.1	30	10	.84
12	33	6	.56	35	9	.81	29	147	19
13	30	6	.47	31	8	.66	30	91	7.8
14	29	5	.42	29	7	.58	25	33	2.2
15	31	50	4.3	39	99	14	234	1570	3500
16	27	4	.33	29	16	1.3	228	956	791
17	24	2	.11	27	14	1.0	92	69	18
18	23	0	.02	24	9	.58	62	28	4.7
19	22	1	.05	24	20	1.4	48	12	1.6
20	20	2	.13	36	196	26	44	10	1.3
21	20	2	.11	28	18	1.4	36	4	.38
22	20	3	.18	27	9	.66	60	442	195
23	20	5	.25	28	7	.50	58	46	8.2
24	20	7	.39	24	5	.31	49	17	2.3
25	18	4	.19	21	3	.20	38	13	1.3
26	16	4	.18	22	33	2.9	30	10	.85
27	16	4	.18	30	79	6.7	26	15	1.0
28	20	103	8.6	24	5	.31	34	81	8.7
29	20	33	1.7	20	1	.06	27	45	3.4
30	20	68	5.1	18	3	.15	22	16	.98
31	---	---	---	17	3	.12	---	---	---
TOTAL	1006	---	112.09	1137	---	318.14	1493	---	5154.59
		JULY			AUGUST			SEPTEMBER	
1	21	3	.15	11	29	.94	5.7	4	.06
2	21	8	.43	9.5	12	.31	5.9	2	.04
3	25	52	4.2	7.8	3	.06	5.0	1	.02
4	23	6	.38	6.6	1	.02	4.9	0	.00
5	19	3	.17	6.3	2	.03	4.1	1	.01
6	18	11	.59	7.5	17	.38	4.4	2	.02
7	17	3	.13	6.5	21	.36	4.3	1	.01
8	16	4	.18	5.3	9	.13	4.0	1	.01
9	16	2	.10	4.8	6	.07	4.0	1	.01
10	13	2	.08	4.6	3	.04	4.1	1	.01
11	13	7	.33	4.9	8	.11	4.2	1	.02
12	13	7	.25	5.0	6	.08	4.1	1	.01
13	11	2	.06	5.0	4	.05	3.6	1	.00
14	10	1	.04	4.8	3	.03	3.9	3	.04
15	9.9	7	.19	5.5	14	.23	11	253	14
16	10	5	.14	4.9	14	.19	13	166	7.9
17	9.8	7	.17	5.8	8	.16	6.2	28	.48
18	8.5	8	.18	9.3	12	.42	4.4	25	.30
19	8.1	8	.18	5.8	1	.01	4.3	17	.20
20	7.7	7	.15	5.4	3	.05	3.9	10	.10
21	8.0	8	.17	5.3	8	.15	3.7	7	.07
22	8.0	6	.12	5.4	9	.14	16	315	17
23	7.2	6	.11	7.0	79	2.3	27	754	74
24	6.8	5	.09	17	323	19	12	61	2.1
25	6.1	4	.07	10	12	.34	11	53	3.0
26	5.6	4	.06	12	85	3.1	24	380	36
27	7.1	156	6.7	8.4	31	.72	12	30	1.0
28	8.2	148	4.1	6.6	4	.08	9.4	17	.44
29	6.8	3	.06	6.5	24	.54	9.5	14	.36
30	7.7	10	.29	7.8	4	.09	37	232	46
31	8.1	13	.28	5.9	2	.03	---	---	---
TOTAL	369.6	---	20.15	218.2	---	30.16	266.6	---	203.21
YEAR	12265.5		14088.87						

03401450 STONEY FORK NEAR MOUTH AT MIDDLESBORO, KY

LOCATION.--Lat 36°36'49", long 83°45'12", Bell County Hydrologic Unit 05130101, on right upstream side of highway bridge on state highway 1599 in Middlesboro, Ky.

DRAINAGE AREA.--15.5 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to September 1989 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,160.000 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 4-21, June 9-14, 16-26, and Aug 12 to Sept. 30. Water-discharge records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,730 ft^3/s, June 15, 1989, gage height, 12.28 ft; minimum daily discharge, 1.6 ft^3/s, July 8, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 9,730 ft^3/s, June 15, gage height, 12.28 ft; minimum daily discharge, 2.5 ft^3/s, Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	3.9	45	62	13	27	29	39	12	18	12	6.5
2	5.7	4.1	36	58	12	26	27	35	12	18	10	8.0
3	4.5	3.9	31	50	16	26	31	26	12	28	5.9	5.5
4	3.9	9.0	29	39	16	24	142	23	11	26	5.0	4.8
5	3.4	95	26	33	20	57	109	106	14	24	4.6	4.7
6	3.3	61	24	93	28	497	69	165	49	31	5.8	4.5
7	3.0	30	23	90	31	127	57	101	35	41	5.3	4.4
8	3.0	20	22	187	27	73	71	66	30	31	4.1	4.2
9	2.9	16	20	110	21	53	68	59	70	22	3.7	4.1
10	2.9	43	19	71	20	43	55	52	54	17	2.9	4.0
11	2.7	41	19	72	15	36	44	43	40	14	2.6	4.8
12	2.5	26	18	900	14	31	37	37	44	12	3.0	4.5
13	2.5	20	17	287	14	28	32	31	85	10	2.9	4.3
14	2.8	16	16	138	87	26	29	26	35	9.3	2.9	4.0
15	2.8	14	16	231	92	23	35	65	1580	7.2	7.0	20
16	2.8	17	16	110	66	19	28	52	320	6.5	5.8	70
17	3.3	25	15	68	76	18	25	40	160	5.6	4.5	15
18	3.0	20	15	49	82	25	24	33	80	4.0	18	7.0
19	3.3	58	14	37	62	22	22	31	60	3.7	7.0	5.1
20	3.0	414	14	30	107	27	21	53	50	4.4	5.5	4.8
21	7.8	130	25	24	555	107	20	40	35	6.3	4.7	4.6
22	7.1	71	56	20	153	75	20	33	150	6.6	4.0	30
23	5.4	51	96	18	85	57	18	31	70	5.2	8.3	100
24	6.8	40	313	17	56	46	18	26	50	4.5	22	20
25	5.3	33	174	15	42	37	17	22	36	3.9	12	14
26	4.7	30	84	14	38	33	15	20	28	3.6	40	60
27	4.2	56	59	14	33	29	15	21	22	9.9	10	17
28	5.3	103	59	13	30	26	16	17	34	13	6.4	13
29	4.8	74	51	13	---	25	17	16	22	6.0	5.4	11
30	4.6	56	46	15	---	24	19	14	19	9.0	13	44
31	4.3	---	45	14	---	35	---	13	---	10	7.8	---
TOTAL	126.2	1580.9	1443	2892	1811	1702	1130	1336	3219	410.7	251.8	503.8
MEAN	4.07	52.7	46.5	93.3	64.7	54.9	37.7	43.1	107	13.2	8.12	16.8
MAX	7.8	414	313	900	555	497	142	165	1580	41	40	100
MIN	2.5	3.9	14	13	12	18	15	13	11	3.6	2.6	4.0

CAL YR 1988 TOTAL 9285.2 MEAN 25.4 MAX 688 MIN 1.6
WTR YR 1989 TOTAL 16406.4 MEAN 44.9 MAX 1580 MIN 2.5

03401450 STONY FORK NEAR MOUTH AT MIDDLESBORO, KY.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1986 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: December 1986 to September 1989 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,550 mg/L, June 15, 1989; minimum daily mean, 0 mg/L, on several days in 1987-89.
SEDIMENT LOADS: Maximum daily, 23,700 tons, June 15, 1989; minimum daily, 0 ton, on several days in 1987-89.

EXTREMES FOR CURRENT YEAR--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,550 mg/L, June 15; minimum daily mean, 0 mg/L, on several days throughout the year.
SEDIMENT LOADS: Maximum daily, 23,700 tons, June 15; minimum daily, 0 ton, on several days throughout the year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM
OCT										
03...	1050	4.5	640	17.0	1	0.01	--	--	--	--
NOV										
05...	2300	71	--	10.0	167	32	42	58	--	87
10...	1440	77	--	14.5	1790	372	48	66	84	93
14...	1150	16	395	9.0	7	0.29	--	--	--	--
19...	1330	31	--	10.0	321	27	40	59	77	90
19...	1910	129	--	10.5	779	271	30	43	59	75
20...	0830	816	--	13.0	5140	11300	24	34	49	64
DEC										
21...	1035	27	--	9.0	130	9.5	34	50	--	80
21...	1540	76	--	--	839	172	52	72	89	98
23...	1015	115	--	--	370	115	45	59	--	89
JAN										
04...	1120	37	285	4.0	6	0.60	--	--	--	--
12...	0900	816	--	--	2000	4410	23	32	47	61
12...	1440	1800	--	--	5380	26100	18	26	39	52
FEB										
14...	1440	166	--	--	2200	986	40	56	74	90
20...	1615	180	--	--	1590	773	34	49	66	83
21...	1345	553	126	9.5	761	1140	--	--	--	--
21...	1410	553	126	9.5	857	1280	21	30	42	53
MAR										
06...	1445	367	--	--	252	250	25	31	54	68
APR										
04...	1125	208	--	--	1010	567	34	47	64	77
12...	1155	37	275	7.0	3	0.30	--	--	--	--
MAY										
01...	1850	48	--	15.0	123	16	44	55	--	91
06...	1030	317	--	11.0	223	191	24	34	--	65
16...	1125	54	250	12.0	16	2.3	--	--	--	--
20...	1420	142	--	16.5	119	46	51	66	--	93
JUN										
09...	0930	38	--	17.0	4330	444	23	35	50	68
15...	1730	967	--	18.0	4620	12100	16	25	37	52
23...	1220	19	382	22.0	1	0.05	--	--	--	--
AUG										
10...	1140	3.0	705	19.5	0	0.0	--	--	--	--

03401450 STONY FORK NEAR MOUTH AT MIDDLESBORO, KY.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. FALL DIAM. % FINER THAN .500 MM	SED. SUSP. FALL DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
OCT									
03...	--	--	--	--	--	--	67	--	--
NOV									
05...	--	--	--	--	--	--	99	--	--
10...	98	100	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	76	--	--
19...	98	99	100	--	--	--	--	--	--
19...	90	98	100	--	--	--	--	--	--
20...	82	94	99	100	--	--	--	--	--
DEC									
21...	--	--	--	--	--	--	97	--	--
21...	99	--	--	--	--	--	100	--	--
23...	--	--	--	--	--	--	99	--	--
JAN									
04...	--	--	--	--	--	--	85	--	--
12...	76	88	98	100	--	--	--	--	--
12...	67	80	94	100	--	--	--	--	--
FEB									
14...	97	99	100	--	--	--	--	--	--
20...	92	99	100	--	--	--	--	--	--
21...	--	--	--	--	--	--	67	--	--
21...	63	71	79	84	90	90	--	90	95
MAR									
06...	84	94	99	100	--	--	--	--	--
APR									
04...	88	91	92	92	92	--	--	92	93
12...	--	--	--	--	--	--	100	--	--
MAY									
01...	--	--	--	--	--	--	98	--	--
06...	--	95	99	100	--	--	--	--	--
16...	--	--	--	--	--	--	90	--	--
20...	--	--	--	--	--	--	99	--	--
JUN									
09...	84	93	98	100	--	--	--	--	--
15...	68	80	96	99	100	--	--	--	--
23...	--	--	--	--	--	--	100	--	--
AUG									
10...	--	--	--	--	--	--	--	--	--

03401450 STONY FORK NEAR MOUTH AT MIDDLESBORO, KY.--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	4.6	1	.01	3.9	1	.01	45	8	.95
2	5.7	12	.20	4.1	0	.00	36	6	.60
3	4.5	1	.02	3.9	0	.00	31	5	.45
4	3.9	1	.01	9.0	85	7.4	29	6	.47
5	3.4	0	.00	95	608	187	26	6	.44
6	3.3	1	.01	61	69	13	24	3	.20
7	3.0	2	.01	30	25	2.0	23	4	.26
8	3.0	2	.02	20	13	.72	22	4	.22
9	2.9	1	.00	16	7	.31	20	4	.23
10	2.9	2	.01	43	300	62	19	4	.23
11	2.7	2	.01	41	64	7.7	19	2	.11
12	2.5	3	.02	26	27	1.9	18	8	.40
13	2.5	1	.01	20	15	.82	17	5	.25
14	2.8	1	.00	16	8	.33	16	2	.10
15	2.8	2	.01	14	5	.17	16	2	.07
16	2.8	2	.01	17	144	13	16	1	.05
17	3.3	3	.02	25	68	5.2	15	3	.11
18	3.0	3	.02	20	9	.47	15	6	.24
19	3.3	4	.03	58	259	76	14	6	.21
20	3.0	12	.09	414	1230	2330	14	3	.11
21	7.8	793	21	130	81	31	25	269	18
22	7.1	595	12	71	37	7.2	56	32	5.3
23	5.4	32	.49	51	15	2.0	96	237	73
24	6.8	190	3.8	40	9	.96	313	1200	1860
25	5.3	10	.15	33	7	.67	174	117	71
26	4.7	0	.00	30	6	.51	84	18	4.2
27	4.2	0	.00	56	97	19	59	12	1.8
28	5.3	155	2.4	103	144	41	59	19	3.3
29	4.8	10	.13	74	22	4.4	51	9	1.3
30	4.6	0	.01	56	11	1.7	46	7	.86
31	4.3	0	.00	---	---	---	45	13	1.6
TOTAL	126.2	---	40.49	1580.9	---	2816.47	1443	---	2046.06
		JANUARY			FEBRUARY			MARCH	
1	62	53	9.2	13	5	.19	27	16	1.2
2	58	13	2.1	12	7	.24	26	13	.89
3	50	13	1.7	16	102	5.6	26	10	.67
4	39	7	.75	16	17	.75	24	8	.50
5	33	5	.45	20	75	4.2	57	44	21
6	93	343	83	28	55	4.3	497	880	1700
7	90	19	4.9	31	34	2.8	127	45	16
8	167	251	165	27	9	.68	73	19	3.8
9	110	24	7.3	21	11	.65	53	10	1.5
10	71	14	2.7	20	20	1.2	43	7	.84
11	72	72	23	15	6	.23	36	6	.54
12	900	2020	6560	14	5	.19	31	6	.51
13	287	193	191	14	39	1.5	28	6	.42
14	138	91	46	87	841	251	26	5	.34
15	231	99	69	92	122	34	23	4	.27
16	110	31	9.5	66	169	31	19	3	.17
17	68	21	3.8	76	410	94	18	3	.15
18	49	12	1.5	82	90	21	25	206	21
19	37	8	.80	62	20	3.3	22	48	2.8
20	30	7	.55	107	456	211	27	268	25
21	24	5	.30	555	1300	2780	107	866	261
22	20	3	.14	153	89	40	75	63	12
23	18	4	.17	85	33	7.6	57	85	13
24	17	4	.19	56	20	3.1	46	15	1.9
25	15	5	.22	42	11	1.2	37	6	.64
26	14	5	.21	38	14	1.4	33	5	.41
27	14	5	.18	33	19	1.7	29	4	.31
28	13	3	.11	30	16	1.3	26	4	.25
29	13	3	.11	---	---	---	25	3	.20
30	15	137	6.0	---	---	---	24	3	.18
31	14	10	.38	---	---	---	35	256	31
TOTAL	2892	---	7190.26	1811	---	3504.13	1702	---	2118.47

03401450 STONY FORK NEAR MOUTH AT MIDDLESBORO, KY.--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	29	22	1.7	39	312	43	12	2	.08
2	27	5	.34	35	26	2.5	12	3	.09
3	31	143	13	26	14	.98	12	1	.04
4	142	468	229	23	29	2.1	11	2	.05
5	109	52	16	106	1730	963	14	135	7.6
6	69	19	3.6	165	351	170	49	506	89
7	57	23	3.6	101	37	10	35	70	7.2
8	71	71	17	66	23	4.0	30	108	9.4
9	68	16	2.9	59	255	44	70	1910	361
10	55	11	1.6	52	41	5.9	54	66	9.7
11	44	8	.92	43	12	1.5	40	16	1.7
12	37	5	.51	37	10	1.0	44	185	22
13	32	5	.47	31	7	.61	85	93	21
14	29	5	.37	26	5	.37	35	39	3.7
15	35	58	5.9	65	281	80	1580	5550	23700
16	28	5	.37	52	21	3.0	320	1330	1150
17	25	3	.22	40	17	1.8	160	129	56
18	24	7	.46	33	9	.77	80	29	6.2
19	22	6	.35	31	21	1.9	60	12	1.9
20	21	2	.10	53	203	41	50	32	4.4
21	20	5	.26	40	18	1.9	35	11	1.1
22	20	4	.22	33	9	.80	150	23	9.4
23	18	18	.88	31	7	.55	70	28	5.2
24	18	3	.16	26	5	.33	50	16	2.1
25	17	7	.31	22	3	.21	36	9	.86
26	15	2	.08	20	46	2.6	28	5	.36
27	15	1	.05	21	71	4.1	22	2	.14
28	16	66	3.5	17	5	.22	34	81	9.0
29	17	89	4.2	16	1	.04	22	30	1.7
30	19	149	13	14	3	.11	19	19	1.5
31	---	---	---	13	3	.09	---	---	---
TOTAL	1130	---	321.07	1336	---	1388.38	3219	---	25482.42
		JULY			AUGUST			SEPTEMBER	
1	18	13	.62	12	196	8.6	6.5	4	.08
2	18	12	.61	10	38	1.2	8.0	3	.06
3	28	46	4.6	5.9	9	.14	5.5	2	.03
4	26	17	1.2	5.0	4	.05	4.8	2	.03
5	24	11	.74	4.6	4	.04	4.7	4	.05
6	31	82	11	5.8	7	.12	4.5	3	.04
7	41	99	12	5.3	2	.04	4.4	2	.02
8	31	8	.69	4.1	1	.01	4.2	2	.02
9	22	2	.11	3.7	0	.00	4.1	2	.03
10	17	1	.04	2.9	0	.00	4.0	2	.03
11	14	1	.05	2.6	4	.03	4.8	1	.02
12	12	1	.04	3.0	1	.01	4.5	1	.01
13	10	0	.01	2.9	3	.02	4.3	1	.01
14	9.3	0	.00	2.9	2	.01	4.0	9	.09
15	7.2	0	.00	7.0	5	.09	20	2270	122
16	6.5	1	.01	5.8	1	.02	70	315	60
17	5.6	0	.00	4.5	16	.19	15	18	.72
18	4.0	0	.00	18	105	5.1	7.0	69	1.3
19	3.7	1	.01	7.0	9	.17	5.1	81	1.1
20	4.4	1	.01	5.5	3	.04	4.8	53	.69
21	6.3	4	.07	4.7	52	.67	4.6	14	.17
22	6.6	1	.02	4.0	18	.19	30	471	38
23	5.2	0	.01	8.0	70	1.5	100	342	92
24	4.5	1	.01	22	214	13	20	20	1.1
25	3.9	0	.00	12	27	.86	14	130	4.9
26	3.6	0	.00	40	108	12	60	141	23
27	8.9	53	10	10	25	.68	17	8	.35
28	13	106	4.2	6.4	5	.09	13	4	.13
29	6.0	15	.25	5.4	8	.11	11	9	.27
30	9.0	38	1.7	13	45	1.6	44	739	88
31	10	16	.55	7.8	6	.13	---	---	---
TOTAL	410.7	---	48.55	251.8	---	46.71	503.8	---	434.25
YEAR	16406.4		45437.26						

03402000 YELLOW CREEK NEAR MIDDLESBORO, KY

LOCATION.--Lat 36°40'05", long 83°41'19", Bell County, Hydrologic Unit 05130101, on left bank 35 ft downstream from bridge on U.S. Highway 25E, 1.2 mi downstream from Browne Branch, 4.6 mi north of Middlesboro, and at mile 11.4.

DRAINAGE AREA.--60.6 mi^2. Area at site used prior to Oct. 1970, 58.2 mi^2 and at site used Oct. 1, 1970 to Sept. 30, 1973, 62.8 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1940 to current year.

REVISED RECORDS.--WSP 953: 1941(M). WSP 973: 1942(M). WSP 1436: Drainage area. WRD KY 1969: 1965(M), 1967(M).

GAGE.--Water-stage recorder. Datum of gage is 1,097.99 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 7, 1941, nonrecording gage and Jan. 7, 1941 to Sept. 30, 1970, water-stage recorder, at site 1.7 mi upstream at datum 6.21 ft higher. Oct. 1, 1970 to Sept. 30, 1973, nonrecording gage at site 2.8 mi downstream at datum 29.37 ft lower.

REMARKS.--No estimated daily discharges. Water-discharge records good. Occasional regulation from Fern Lake.

AVERAGE DISCHARGE.--49 years, 116 ft^3/s, 25.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s, Apr. 4, 1977, gage height, 23.35 ft; no flow for part of Sept. 26, 1952 (caused by construction work above gage).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 21.4 ft by U.S. Army Corps of Engineers, site and datum then in use; flood of Feb. 3, 1939, reached a stage of 18.5 ft, from floodmarks, site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	2100	4,290	13.77	Mar. 6	0900	3,100	11.92
Feb. 21	1100	3,470	12.53	June 16	0100	*4,940	*14.66

Minimum discharge, 8.2 ft^3/s, Oct. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	81	175	50	113	122	154	31	54	27	19
2	15	15	65	167	48	100	113	142	29	56	29	21
3	13	14	54	150	60	97	143	103	29	81	21	16
4	11	17	48	119	63	90	564	84	26	91	18	14
5	10	324	42	96	88	165	495	470	47	102	16	14
6	9.8	193	39	382	117	2430	289	818	407	79	22	13
7	8.9	87	36	333	136	686	224	399	215	106	19	13
8	8.6	53	33	710	124	305	287	248	109	95	16	13
9	9.0	37	33	420	101	213	252	222	664	67	15	12
10	9.2	95	30	252	91	166	197	189	310	52	14	12
11	9.1	100	29	228	85	139	162	157	145	45	14	13
12	8.8	58	24	2730	75	120	136	130	153	42	13	13
13	8.7	48	25	1880	76	104	115	105	251	39	13	12
14	9.1	36	25	608	342	93	96	85	137	33	13	12
15	9.4	31	25	1110	434	81	122	178	1070	28	18	56
16	9.9	34	23	511	330	68	92	127	2520	26	17	89
17	12	70	22	313	390	62	79	102	633	26	14	25
18	12	48	21	221	482	82	70	83	301	23	26	19
19	13	184	21	173	358	69	66	80	194	22	16	16
20	13	1360	21	140	501	93	62	164	172	23	15	15
21	33	332	83	115	2650	318	57	114	127	23	14	14
22	25	149	103	99	922	241	52	92	413	22	17	96
23	16	99	201	87	402	191	49	105	246	20	21	218
24	26	72	1020	78	252	160	49	80	185	19	69	64
25	18	57	774	69	193	132	45	67	124	18	34	42
26	15	50	259	65	166	115	42	59	89	17	42	136
27	14	89	166	62	153	100	37	75	71	17	28	57
28	20	179	165	54	136	88	52	53	101	33	20	38
29	19	126	135	50	---	82	67	46	85	19	18	35
30	16	102	120	66	---	93	57	39	58	30	37	170
31	16	---	125	57	---	152	---	35	---	30	23	---
TOTAL	429.5	4074	3848	11520	8825	6948	4193	4805	8942	1338	679	1287
MEAN	13.9	136	124	372	315	224	140	155	298	43.2	21.9	42.9
MAX	33	1360	1020	2730	2650	2430	564	818	2520	106	69	218
MIN	8.6	14	21	50	48	62	37	35	26	17	13	12
CFSM	.23	2.24	2.05	6.13	5.20	3.70	2.31	2.56	4.92	.71	.36	.71
IN.	.26	2.50	2.36	7.07	5.42	4.27	2.57	2.85	5.49	.82	.42	.79

CAL YR 1988 TOTAL 28814.7 MEAN 78.7 MAX 2970 MIN 6.0 CFSM 1.30 IN. 17.69
WTR YR 1989 TOTAL 56888.5 MEAN 156 MAX 2730 MIN 8.6 CFSM 2.57 IN. 34.92

03402000 YELLOW CREEK NEAR MIDDLESBORO, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1979 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,360 mg/L, Sept. 1, 1982; minimum daily mean, 0 mg/L, Jan. 11, 1988.
SEDIMENT LOADS: Maximum daily, 35,400 tons, Aug. 8, 1981; minimum daily, 0 ton, Mar. 15, 1984.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,650 mg/L, Mar. 6; minimum daily mean, 3 mg/L, Sept. 14.
SEDIMENT LOADS: Maximum daily, 15,900 tons, June 16; minimum daily, 0.11 ton, Sept. 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
03...	1310	12	600	18.5	37	1.2	85
NOV							
15...	1400	31	460	9.5	10	0.83	79
JAN							
11...	1140	171	302	6.5	13	6.0	73
MAR							
01...	1320	111	375	6.5	13	3.9	92
APR							
07...	1410	218	256	10.5	15	8.8	76
MAY							
16...	1055	135	312	13.0	24	8.7	91
JUN							
29...	1125	86	369	21.0	47	11	96
AUG							
08...	1145	16	600	21.5	39	1.7	98

03402000 YELLOW CREEK NEAR MIDDLESBORO, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	11	31	.95	15	16	.66	81	8	1.8
2	15	43	1.9	15	10	.38	65	7	1.3
3	13	35	1.2	14	7	.26	54	7	1.1
4	11	37	1.1	17	23	1.7	48	7	.91
5	10	42	1.2	324	156	164	42	7	.77
6	9.8	33	.88	193	121	66	39	7	.69
7	8.9	24	.58	87	78	18	36	7	.63
8	8.6	16	.36	53	51	7.3	33	6	.57
9	9.0	13	.32	37	31	3.1	33	13	1.2
10	9.2	31	.78	95	83	35	30	13	1.1
11	9.1	65	1.6	100	46	13	29	10	.79
12	8.8	31	.72	58	24	3.7	24	8	.51
13	8.7	26	.60	48	21	2.7	25	6	.41
14	9.1	31	.75	36	17	1.6	25	6	.43
15	9.4	20	.51	31	13	1.1	25	6	.38
16	9.9	16	.42	34	50	8.1	23	6	.40
17	12	30	1.1	70	104	22	22	6	.38
18	12	18	.62	48	29	3.8	21	6	.32
19	13	19	.69	184	204	272	21	5	.30
20	13	15	.53	1360	1040	5580	21	5	.30
21	33	50	6.3	332	116	124	83	97	43
22	25	44	2.9	149	29	12	103	50	15
23	16	27	1.1	99	15	4.1	201	70	46
24	26	142	11	72	11	2.2	1020	653	3780
25	18	67	3.3	57	10	1.5	774	175	486
26	16	63	2.7	50	10	1.3	259	33	24
27	14	48	1.8	89	68	20	166	20	8.9
28	20	87	5.4	179	111	56	165	30	15
29	19	49	2.6	126	15	5.4	135	11	4.0
30	16	26	1.2	102	10	2.8	120	10	3.3
31	16	20	.88	---	---	---	125	26	9.8
TOTAL	429.5	---	56.00	4074	---	6434.70	3848	---	4449.29
		JANUARY			FEBRUARY			MARCH	
1	175	116	55	50	7	.97	113	12	3.8
2	167	30	13	48	9	1.1	100	8	2.2
3	150	16	6.4	60	66	15	97	6	1.6
4	119	12	3.9	63	72	13	90	6	1.3
5	96	9	2.2	88	69	18	165	163	224
6	382	166	191	117	52	17	2430	1650	11900
7	333	60	56	136	21	7.6	686	68	139
8	710	268	679	124	11	3.7	305	39	32
9	420	69	80	101	10	2.7	213	29	17
10	252	39	27	91	12	3.1	166	21	9.5
11	228	41	37	85	6	1.5	139	16	5.8
12	2730	1270	12000	75	5	.92	120	14	4.5
13	1880	498	3160	76	9	2.0	104	12	3.3
14	608	227	416	342	511	852	93	9	2.2
15	1110	488	1650	434	116	152	81	7	1.6
16	511	63	90	330	95	87	68	7	1.2
17	313	35	30	390	233	295	62	6	1.0
18	221	24	15	482	189	252	82	41	12
19	173	19	8.8	358	36	35	69	26	4.9
20	140	14	5.4	501	334	755	93	69	22
21	115	11	3.5	2650	734	5960	318	168	165
22	99	9	2.5	922	136	359	241	21	14
23	87	8	1.9	402	73	80	191	15	7.7
24	78	13	2.8	252	51	34	160	10	4.3
25	69	11	2.1	193	34	18	132	9	3.0
26	65	8	1.3	186	20	9.0	115	8	2.4
27	62	7	1.2	153	17	7.2	100	7	2.0
28	54	6	.83	136	17	6.2	88	9	2.2
29	50	5	.65	---	---	---	82	6	1.5
30	66	19	3.9	---	---	---	93	5	1.3
31	57	9	1.4	---	---	---	152	96	51
TOTAL	11520	---	18547.78	8825	---	8987.99	6948	---	12643.3

03402000 YELLOW CREEK NEAR MIDDLESBORO, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	122	11	3.7	154	137	63	31	15	1.2
2	113	6	1.7	142	20	8.1	29	13	1.0
3	143	58	25	103	10	2.9	29	12	.97
4	564	338	679	84	11	2.9	26	11	.79
5	495	57	82	470	379	1010	47	30	10
6	289	17	14	818	241	568	407	942	1720
7	224	12	7.5	399	78	87	215	152	107
8	287	163	184	248	34	23	109	26	8.1
9	252	29	21	222	20	12	664	788	2100
10	197	8	4.4	189	16	8.2	310	123	115
11	162	6	2.8	157	12	4.9	145	43	17
12	136	6	2.1	130	10	3.4	153	84	62
13	115	5	1.6	105	9	2.6	251	107	85
14	96	6	1.5	85	7	1.7	137	51	19
15	122	43	15	178	121	82	1070	1420	12400
16	92	22	5.6	127	35	12	2520	1550	15900
17	79	18	3.8	102	21	5.8	633	163	293
18	70	16	3.0	83	16	3.6	301	89	73
19	66	11	1.9	80	24	5.6	194	56	30
20	62	6	.95	164	80	46	172	59	29
21	57	4	.69	114	20	6.1	127	24	8.4
22	52	4	.59	92	23	6.1	413	533	1220
23	49	5	.64	105	80	24	246	111	80
24	49	13	1.7	80	42	9.1	185	48	24
25	45	17	2.0	67	33	5.9	124	34	11
26	42	14	1.6	59	20	3.3	89	28	6.8
27	37	14	1.4	75	43	8.8	71	25	4.8
28	52	42	10	53	22	3.2	101	94	29
29	67	23	4.2	46	16	2.0	85	66	16
30	57	16	3.8	39	15	1.6	58	25	4.0
31	---	---	---	35	14	1.3	---	---	---
TOTAL	4193	---	1087.17	4805	---	2024.1	8942	---	34376.06
		JULY			AUGUST			SEPTEMBER	
1	54	27	4.0	27	90	7.2	19	38	2.0
2	56	21	3.2	29	98	8.0	21	35	2.0
3	81	37	9.8	21	60	3.4	16	25	1.1
4	91	38	12	18	47	2.3	14	27	1.0
5	102	71	20	16	39	1.7	14	29	1.1
6	79	53	12	22	53	3.5	13	20	.69
7	106	89	29	19	49	2.5	13	10	.36
8	95	62	16	16	46	2.0	13	8	.28
9	67	46	8.2	15	41	1.6	12	12	.39
10	52	46	6.4	14	55	2.1	12	7	.23
11	45	47	5.7	14	47	1.7	13	11	.39
12	42	44	5.0	13	37	1.3	13	8	.29
13	39	32	3.3	13	28	.96	12	4	.14
14	33	29	2.6	13	21	.72	12	3	.11
15	28	29	2.2	18	32	1.9	56	96	27
16	26	27	1.9	17	39	1.7	89	156	54
17	26	27	1.9	14	43	1.6	25	39	2.7
18	23	23	1.5	26	105	7.8	19	27	1.3
19	22	40	2.4	16	55	2.3	16	20	.84
20	23	49	3.0	15	34	1.3	15	14	.57
21	23	33	2.0	14	24	.95	14	11	.41
22	22	27	1.6	17	31	1.5	96	90	39
23	20	29	1.5	21	39	3.7	218	296	230
24	19	30	1.5	69	172	40	64	67	12
25	18	28	1.3	34	64	6.2	42	50	6.6
26	17	25	1.1	42	105	13	136	143	61
27	17	26	1.3	28	46	3.5	57	42	6.6
28	33	73	8.0	20	33	1.8	38	27	2.8
29	19	26	1.3	18	29	1.4	35	29	2.8
30	30	68	8.6	37	109	12	170	128	119
31	30	100	8.2	23	51	3.2	---	---	---
TOTAL	1338	---	186.5	679	---	142.83	1287	---	576.70
YEAR	56888.5		89512.42						

03402000 CUMBERLAND RIVER NEAR PINEVILLE, KY

LOCATION.--Lat 36°48'48", long 83°45'58", Knox County, Hydrologic Unit 05130101, on downstream side of bridge on U.S. Highway 25E, 0.5 mi south of Flat Lick, 2.4 mi downstream from Greasy Creek, 4.8 mi upstream from Stinking Creek, 5.0 mi northwest of Pineville, and at mile 647.2.

DRAINAGE AREA.--809 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1938 to September 1975, October 1979 to current year.

REVISED RECORDS.--WSP 1053: 1939. WSP 1436: Drainage area. WSP 1910: 1957. WRD KY 1968: 1967.

GAGE.--Water-stage recorder. Datum of gage is 955.45 ft Sandy Hook datum. Prior to June 23, 1939, nonrecording gage 200 ft upstream at same datum. June 23, 1939 to Mar. 19, 1956, water-stage recorder 200 ft upstream at same datum. Auxiliary water-stage recorder 1.9 mi upstream from base gage. May 26, 1943 to Sept. 30, 1975, auxiliary nonrecording gage 1.9 mi upstream from base gage.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow slightly regulated by Martins Fork Dam (station 03400798) beginning January 1979. Low flow regulated by power plant 1.9 mi upstream.

AVERAGE DISCHARGE.--47 years (Water years 1939-75, 1980-89), 1,382 ft^3/s, 23.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,900 ft^3/s, Jan. 8, 1946; maximum gage height, 49.77 ft, Dec. 31, 1969; minimum discharge, 5.6 ft^3/s, Aug. 14, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1929 reached a stage of 47.3 ft discharge, 51,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	0500	21,500	32.80	Mar. 6	1600	18,500	31.03
Feb. 21	2100	16,600	29.34	Jun. 16	0700	*39,100	*43.01

Minimum discharge, 101 ft^3/s, Oct. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	152	1110	1510	794	1850	2050	1860	651	1500	784	1510
2	168	148	924	1610	750	1720	1980	3360	611	1760	864	1480
3	167	141	773	1570	853	1630	1950	3090	627	1210	666	963
4	158	141	647	1400	1820	1570	3670	2270	551	1200	502	693
5	141	1050	580	1210	2180	1760	5590	3390	542	1580	413	548
6	131	1640	520	2340	2060	14400	3840	11800	1980	1280	389	461
7	125	1200	445	3900	2200	9850	3060	7930	5470	1760	391	423
8	119	781	411	3900	2050	5160	2840	5040	3020	2810	390	394
9	115	617	405	3990	1720	3240	3050	3600	5410	1620	321	360
10	113	575	406	2970	1460	2630	2700	3380	6490	1170	279	341
11	111	876	363	2340	1340	2140	2330	2980	3130	942	249	366
12	109	694	315	8270	1160	1820	1990	2690	2350	796	226	376
13	106	590	295	18100	1080	1620	1750	2250	4780	1030	213	328
14	102	539	311	8060	1810	1520	1500	1890	4430	813	200	336
15	101	476	333	8810	3700	1380	1500	2080	9760	646	212	549
16	102	448	301	6790	3100	1220	1410	1940	34100	541	248	5320
17	104	824	270	4410	3340	1040	1250	1580	19200	489	221	3690
18	106	1170	254	3180	3790	1030	1160	1370	10300	443	282	2010
19	108	1070	238	2610	3400	1440	1090	1240	6280	398	269	1450
20	106	4980	234	2160	3380	1380	973	1920	3520	398	324	1050
21	134	4660	442	1710	11500	3510	898	2680	2680	415	258	771
22	217	2270	1490	1450	11300	4780	834	2050	2250	377	267	1460
23	211	1530	2340	1310	5390	3310	783	3050	2490	366	312	5850
24	176	1130	4470	1200	3760	2860	752	2390	2220	373	787	3830
25	162	940	8080	1100	2920	2450	723	1820	1730	330	1220	2260
26	161	808	4040	1030	2530	2130	693	1510	1430	282	1330	2570
27	148	917	2460	997	2280	1850	650	1390	1300	271	1530	2430
28	142	1740	1950	885	2110	1590	1280	1210	1290	430	886	1840
29	150	1760	1800	774	---	1370	1190	1030	1220	564	624	1400
30	156	1370	1530	790	---	1290	1520	910	934	448	3730	1330
31	151	---	1410	872	---	1570	---	793	---	537	3730	---
TOTAL	4267	35237	39147	101248	83777	85110	55006	84493	140746	26779	22117	46389
MEAN	138	1175	1263	3266	2992	2745	1834	2726	4692	864	713	1546
MAX	217	4980	8080	18100	11500	14400	5590	11800	34100	2810	3730	5850
MIN	101	141	234	774	750	1030	650	793	542	271	200	328
CFSM	.17	1.45	1.56	4.04	3.70	3.39	2.27	3.37	5.80	1.07	.88	1.91
IN.	.20	1.62	1.80	4.66	3.85	3.91	2.53	3.88	6.47	1.23	1.02	2.13

CAL YR 1988 TOTAL 296920 MEAN 811 MAX 14700 MIN 54 CFSM 1.00 IN. 13.65
WTR YR 1989 TOTAL 724316 MEAN 1984 MAX 34100 MIN 101 CFSM 2.45 IN. 33.31

03403000 CUMBERLAND RIVER NEAR PINEVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1979 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,700 mg/L, May 7, 1984; minimum daily mean, 1 mg/L, many days in 1979-89.
SEDIMENT LOADS: Maximum daily, 244,000 tons, May 7, 1984; minimum daily, 0.14 ton, July 31, Aug. 1, 1988.

EXTREMES FOR CURRENT RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,500 mg/L, Mar. 6; minimum daily mean, 3 mg/L, Dec. 17-19.
SEDIMENT LOADS: Maximum daily, 135,000 tons, June 16; minimum daily, 1.7 ton, Dec. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	1130	149	547	15.0	31	12	94
NOV							
16...	1145	422	400	14.0	15	17	84
JAN							
11...	1250	2190	244	9.5	24	142	75
FEB							
24...	1500	3710	249	3.5	64	641	65
APR							
11...	1335	2420	260	8.5	13	85	64
MAY							
16...	1610	1870	--	--	77	389	75
JUN							
27...	1115	1290	383	--	42	146	76
AUG							
14...	1120	207	562	25.0	12	6.7	77

03403000 CUMBERLAND RIVER NEAR PINEVILLE, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	167	42	19	152	7	2.9	1110	15	44
2	168	39	18	148	6	2.5	924	11	28
3	167	33	15	141	5	2.0	773	9	18
4	158	29	13	141	5	2.0	647	8	14
5	141	27	10	1050	229	814	580	11	17
6	131	25	8.7	1640	163	741	520	18	25
7	125	24	8.0	1200	86	280	445	16	19
8	119	20	6.4	781	45	96	411	14	16
9	115	23	7.1	617	25	43	405	15	16
10	113	53	16	575	25	41	406	18	19
11	111	35	11	876	66	160	363	15	15
12	109	21	6.1	694	25	48	315	6	4.8
13	106	15	4.4	590	20	32	295	4	3.6
14	102	13	3.7	539	20	29	311	7.	6.2
15	101	13	3.6	476	17	22	333	6	5.4
16	102	18	5.0	448	15	18	301	4	3.2
17	104	18	5.0	824	48	122	270	3	2.5
18	106	16	4.6	1170	80	261	254	3	2.2
19	108	14	4.2	1070	42	141	238	3	1.7
20	106	9	2.6	4980	729	11800	234	4	2.6
21	134	6	2.3	4660	353	4520	442	49	98
22	217	18	11	2270	126	784	1490	224	917
23	211	13	7.1	1530	62	259	2340	249	1830
24	176	10	4.7	1130	32	97	4470	547	9710
25	162	9	3.9	940	28	71	8080	1200	26100
26	161	10	4.2	808	25	57	4040	263	3110
27	148	8	3.2	917	42	106	2460	77	518
28	142	8	3.0	1740	44	210	1950	46	242
29	150	7	2.8	1760	36	174	1800	45	217
30	156	11	4.6	1370	22	83	1530	20	83
31	151	8	3.2	---	---	---	1410	15	59
TOTAL	4267	---	221.4	35237	---	21018.4	39147	---	43147.2
		JANUARY			FEBRUARY			MARCH	
1	1510	20	81	794	23	49	1850	27	136
2	1610	25	110	750	19	39	1720	22	102
3	1570	25	107	853	96	256	1630	28	125
4	1400	20	74	1820	280	1390	1570	23	99
5	1210	15	50	2180	46	273	1760	188	1150
6	2340	164	1470	2060	17	97	14400	1500	58300
7	3900	191	2090	2200	23	139	9850	303	8060
8	3900	210	2410	2050	14	81	5160	149	2100
9	3990	117	1300	1720	10	48	3240	78	688
10	2970	59	476	1460	11	43	2630	49	352
11	2340	40	252	1340	9	32	2140	26	154
12	8270	573	12800	1160	5	16	1820	11	55
13	18100	806	39400	1080	6	18	1620	16	71
14	8060	235	5120	1810	99	752	1520	20	81
15	8810	305	7270	3700	252	2590	1380	17	62
16	6790	163	2990	3100	89	741	1220	13	43
17	4410	108	1290	3340	105	978	1040	11	29
18	3180	65	562	3790	214	2190	1030	37	114
19	2610	47	331	3400	107	987	1440	147	584
20	2160	33	191	3380	90	893	1380	95	356
21	1710	25	113	11500	868	27000	3510	221	2530
22	1450	22	85	11300	445	13600	4780	212	2830
23	1310	18	62	5390	150	2180	3310	70	633
24	1200	30	96	3760	81	831	2850	37	284
25	1100	37	111	2920	40	321	2450	24	156
26	1030	28	78	2530	15	104	2130	15	86
27	997	22	58	2280	15	93	1850	12	61
28	885	17	40	2110	21	122	1590	11	46
29	774	13	26	---	---	---	1370	8	31
30	790	14	31	---	---	---	1290	8	27
31	872	30	70	---	---	---	1570	21	95
TOTAL	101248	---	79144	83777	---	55863	85110	---	79440

CUMBERLAND RIVER BASIN

03403000 CUMBERLAND RIVER NEAR PINEVILLE, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	2050	76	424	1860	77	403	651	8	13
2	1980	41	223	3360	303	2870	611	8	14
3	1950	17	88	3090	110	945	627	21	36
4	3670	291	4040	2270	50	306	551	7	11
5	5590	355	5540	3390	131	1820	542	10	16
6	3840	116	1210	11800	734	23400	1980	353	4260
7	3060	69	574	7930	295	6320	5470	960	14900
8	2840	88	696	5040	166	2310	3020	224	1850
9	3050	69	576	3600	154	1490	5410	536	10700
10	2700	19	141	3380	145	1340	6490	480	9390
11	2330	13	80	2980	70	567	3130	112	965
12	1990	15	80	2690	44	316	2350	110	754
13	1750	11	50	2250	32	194	4780	595	7560
14	1500	6	25	1890	22	113	4430	236	2800
15	1500	18	72	2080	55	337	9760	1090	28800
16	1410	6	21	1940	66	352	34100	1470	135000
17	1250	5	17	1580	42	181	19200	324	16800
18	1160	5	17	1370	35	131	10300	238	6610
19	1090	4	12	1240	32	107	6280	191	3190
20	973	4	10	1920	120	781	3520	133	1260
21	898	30	71	2680	94	692	2680	92	667
22	834	37	82	2050	48	271	2250	127	873
23	783	29	61	3050	336	2860	2490	115	803
24	752	21	43	2390	81	531	2220	58	353
25	723	24	47	1820	58	286	1730	29	136
26	693	21	40	1510	47	193	1430	35	136
27	650	17	34	1390	49	183	1300	46	162
28	1280	48	171	1210	39	129	1290	38	137
29	1190	36	116	1030	31	85	1220	25	84
30	1520	65	269	910	26	64	934	15	38
31	---	---	---	793	24	51	---	---	---
TOTAL	55006	---	14830	84493	---	49628	140746	---	248318
		JULY			AUGUST			SEPTEMBER	
1	1500	154	697	784	117	260	1510	309	1290
2	1760	678	3490	864	96	225	1480	401	1630
3	1210	69	229	666	52	94	963	189	496
4	1200	76	264	502	39	53	693	85	163
5	1580	258	1110	413	29	32	548	45	66
6	1280	80	278	389	28	30	461	41	51
7	1760	93	469	391	35	38	423	35	40
8	2810	166	1310	390	35	37	394	31	33
9	1620	102	446	321	20	17	360	29	28
10	1170	53	170	279	12	8.8	341	31	28
11	942	25	65	249	9	6.3	366	32	32
12	796	23	49	226	8	4.9	376	34	35
13	1030	74	215	213	7	4.3	328	23	21
14	813	26	58	200	7	4.0	336	24	22
15	646	14	24	212	13	7.9	549	163	307
16	541	8	12	248	23	16	5320	1230	20600
17	489	6	7.4	221	18	11	3690	494	5430
18	443	5	5.5	282	29	23	2010	135	744
19	398	4	3.8	269	21	15	1450	85	333
20	398	7	8.2	324	16	15	1050	54	156
21	415	16	18	258	15	10	771	31	66
22	377	12	12	267	21	15	1460	117	726
23	366	36	36	312	27	27	5850	378	6360
24	373	57	58	787	102	243	3830	159	1690
25	330	29	26	1220	175	585	2260	61	388
26	282	22	17	1330	578	2590	2570	70	505
27	271	25	19	1530	695	3020	2430	74	488
28	430	54	65	886	148	357	1840	49	243
29	564	78	122	624	120	201	1400	32	124
30	448	53	65	3730	1130	16500	1330	29	121
31	537	66	98	3730	1020	11500	---	---	---
TOTAL	26779	---	9446.9	22117	---	35950.2	46389	---	42216
YEAR	724316		679223.1						

03403500 CUMBERLAND RIVER AT BARBOURVILLE, KY

LOCATION.--Lat 36°51'45", long 83°53'13", Knox County, Hydrologic Unit 05130101, on right bank 100 ft upstream from bridge on State Highway 11, at Barbourville, 0.4 mi upstream from Richland Creek, and at mile 635.2.

DRAINAGE AREA.--960 mi^2

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to September 1931, April 1948 to current year. Monthly discharge only April to June 1948, published in WSP 1306.

REVISED RECORD.--WSP 603: 1923-24. WSP 1336: 1923(M), 1927, 1929, 1950-51. WSP 1436: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 942.97 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 50 ft downstream at datum 1.0 ft higher. July 1, 1948 to Oct. 17, 1975, nonrecording gage at site 50 ft downstream July 1, 1948 to Mar. 21, 1968, and 100 ft downstream Mar. 22, 1968 to Oct. 17, 1975. Since Oct. 1, 1957, auxiliary water-stage recorder 11.7 mi upstream from base gage.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow slightly regulated by Martins Fork Dam (station 03400798) beginning January 1979. Diversion above station by city of Barbourville for municipal water supply.

AVERAGE DISCHARGE.--50 years (Water years 1923-31, 1949-89), 1,746 ft^3/s, 24.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,100 ft^3/s, Apr. 6, 1977; maximum gage height, 45.91 ft, Apr. 6, 1977; minimum discharge observed, 0.2 ft^3/s, Oct. 5, 1930, gage height, -0.25 ft, datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1946 reached a stage of 42.8 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	1200	20,100	27.17	Mar. 7	0200	18,700	26.93
Mar. 6	2100	19,300	26.41	June 16	1200	*31,000	*34.09

Minimum discharge, 110 ft^3/s, Oct. 15, 16, 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	169	1380	1740	950	2180	2210	2000	808	1570	921	1950
2	175	163	1130	1830	901	2020	2200	3250	725	2100	1310	1920
3	176	157	939	1800	1080	1930	2170	3330	750	1570	1040	1310
4	172	155	779	1640	2380	1880	3760	2460	663	1520	719	925
5	158	1020	687	1400	2800	2070	7350	3130	638	1930	546	720
6	149	2070	607	2310	2520	13500	5370	12400	1510	1740	512	572
7	140	1620	525	4870	2490	15000	3540	11100	6130	2030	517	514
8	134	1050	472	4800	2330	8480	3040	7710	3750	3410	506	475
9	127	792	453	5670	1760	5360	3250	4660	5630	2260	418	427
10	126	690	455	3780	1750	3010	2860	3830	8450	1660	340	395
11	124	1040	417	2700	1620	2480	2520	3220	4470	1250	292	420
12	120	902	347	7690	1420	2170	2260	2820	2540	1040	251	458
13	118	741	314	18800	1310	1950	2030	2470	5230	1210	226	397
14	114	656	316	13500	2540	1840	1800	2160	5750	1060	211	382
15	110	572	353	11800	6610	1680	1780	2230	10600	855	214	498
16	110	527	334	10300	5020	1490	1730	2260	29500	725	271	4720
17	113	876	287	7200	4310	1280	1550	1870	24700	634	260	5010
18	115	1370	268	4070	4820	1180	1430	1640	15900	536	276	2300
19	118	1210	251	2960	4270	1590	1350	1460	10100	479	295	1680
20	116	4740	246	2420	3890	1580	1220	2010	7130	456	334	1280
21	133	6990	450	2030	11500	3440	1110	3020	3620	480	317	938
22	205	2980	1920	1710	15700	6590	1020	2390	2400	456	280	1570
23	231	1840	2930	1540	9400	4330	955	3240	2760	421	321	7310
24	199	1350	5520	1420	6460	3270	918	2850	2490	438	1150	6420
25	175	1100	10300	1310	3510	2730	875	2230	2040	396	1600	2990
26	173	942	6930	1220	2830	2420	844	1870	1710	343	1690	2850
27	163	1030	3000	1170	2550	2180	773	1680	1510	301	2030	2830
28	163	2020	2230	1060	2400	1940	1310	1500	1510	437	1220	2210
29	168	2220	2140	911	---	1680	1380	1260	1550	678	840	1760
30	174	1730	1860	912	---	1570	1640	1100	1170	542	3600	1600
31	171	---	1700	1020	---	1780	---	969	---	684	5390	---
TOTAL	4655	42722	49540	125583	109121	104600	64245	98119	165734	33211	27897	56831
MEAN	150	1424	1598	4051	3897	3374	2141	3165	5524	1071	900	1894
MAX	231	6990	10300	18800	15700	15000	7350	12400	29500	3410	5390	7310
MIN	110	155	246	911	901	1180	773	969	638	301	211	382
CFSM	.16	1.48	1.66	4.22	4.06	3.51	2.23	3.30	5.75	1.12	.94	1.97
IN.	.18	1.66	1.92	4.87	4.23	4.05	2.49	3.80	6.42	1.29	1.08	2.20

CAL YR 1988 TOTAL 353737 MEAN 966 MAX 13000 MIN 76 CFSM 1.01 IN. 13.71
WTR YR 1989 TOTAL 882258 MEAN 2417 MAX 29500 MIN 110 CFSM 2.52 IN. 34.19

03403500 CUMBERLAND RIVER AT BARBOURVILLE, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1979 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: October 1979 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,400 mg/L, Aug. 31, 1989; minimum daily mean, 0 mg/L on July 31, 1988.
SEDIMENT LOADS: Maximum daily, 182,000 tons, May 8, 1984; minimum daily, 0.14 ton, July 31, 1988.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,400 mg/L, Aug. 31; minimum daily mean, 1 mg/L, Oct. 27, Dec. 18-20.
SEDIMENT LOADS: Maximum daily, 123,000 tons, June 16; minimum daily, 0.46 tons, Oct. 27.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	1420	150	598	12.5	27	11	99
NOV							
21...	1210	6960	210	11.0	400	7520	82
JAN							
05...	1340	1440	285	6.5	14	54	71
15...	1515	15000	199	10.0	212	8590	81
FEB							
28...	1340	2690	302	6.0	28	203	57
APR							
05...	1440	7350	200	13.5	181	3590	78
MAY							
15...	1345	2220	288	14.5	77	462	75
JUN							
29...	1140	1560	403	24.0	76	320	84
AUG							
14...	1315	205	543	26.5	10	5.5	76

03403500 CUMBERLAND RIVER AT BARBOURVILLE, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	185	38	19	169	7	3.1	1380	21	79
2	175	42	20	163	6	2.8	1130	16	50
3	176	40	19	157	6	2.4	939	13	33
4	172	33	15	155	6	2.5	779	11	23
5	158	26	11	1020	223	1020	687	11	20
6	149	20	8.0	2070	271	1520	607	19	30
7	140	16	5.9	1620	97	433	525	19	27
8	134	12	4.5	1050	54	154	472	15	19
9	127	14	4.8	792	30	65	453	15	18
10	126	7	2.3	690	25	48	455	17	20
11	124	5	1.8	1040	107	308	417	12	13
12	120	5	1.8	902	42	103	347	6	5.9
13	118	6	1.8	741	18	35	314	3	2.8
14	114	6	1.9	656	11	19	316	3	2.7
15	110	7	2.0	572	10	15	353	6	6.1
16	110	9	2.8	527	8	12	334	3	2.4
17	113	8	2.5	876	31	82	287	2	1.3
18	115	9	2.8	1370	115	432	268	1	.94
19	118	9	2.9	1210	57	195	251	1	.79
20	116	9	2.8	4740	669	11600	246	1	.52
21	133	10	3.6	6990	596	11200	450	9	18
22	205	26	15	2980	261	2100	1920	200	1070
23	231	19	12	1840	112	568	2930	225	2200
24	199	8	4.1	1350	63	229	5520	551	10000
25	175	4	1.7	1100	44	131	10300	1170	32600
26	173	2	.90	942	29	75	6930	294	5510
27	163	1	.46	1030	37	106	3000	158	1290
28	163	3	1.3	2020	45	249	2230	101	610
29	168	4	1.9	2220	42	250	2140	61	353
30	174	5	2.6	1730	28	134	1860	39	195
31	171	8	3.9	---	---	---	1700	30	136
TOTAL	4655	---	180.06	42722	---	31093.8	49540	---	54337.45
		JANUARY			FEBRUARY			MARCH	
1	1740	22	103	950	5	12	2180	27	156
2	1830	24	117	901	5	12	2020	22	123
3	1800	27	133	1080	18	63	1930	29	152
4	1640	19	83	2380	62	402	1880	30	156
5	1400	11	40	2800	8	58	2070	156	1110
6	2310	148	1340	2520	6	42	13500	1690	61500
7	4870	275	3650	2490	15	100	15000	339	13700
8	4800	375	5430	2330	13	84	8480	108	2470
9	5670	216	3420	1760	11	50	5360	100	1380
10	3780	72	742	1750	8	37	3010	71	578
11	2700	55	399	1620	7	31	2480	42	283
12	7690	685	14900	1420	6	22	2170	21	123
13	18800	1030	52400	1310	5	17	1950	16	85
14	13500	202	7370	2540	335	3440	1840	13	65
15	11800	219	6990	6610	244	4360	1680	10	45
16	10300	134	3740	5020	79	1040	1490	8	33
17	7200	108	2110	4310	121	1430	1280	6	22
18	4070	97	1060	4820	244	3180	1180	11	37
19	2960	77	613	4270	85	992	1590	187	830
20	2420	54	352	3890	66	741	1580	57	242
21	2030	40	221	11500	849	26400	3440	223	2840
22	1710	36	167	15700	497	21100	6590	340	6060
23	1540	16	66	9400	160	4070	4330	81	964
24	1420	24	92	6460	101	1760	3270	49	434
25	1310	23	82	3510	43	418	2730	26	196
26	1220	19	63	2830	17	126	2420	18	119
27	1170	16	50	2550	41	280	2180	21	122
28	1060	14	41	2400	26	169	1940	16	84
29	911	11	28	---	---	---	1680	13	58
30	912	2	5.3	---	---	---	1570	11	46
31	1020	6	15	---	---	---	1780	26	133
TOTAL	125583	---	105822.3	109121	---	70436	104600	---	94146

CUMBERLAND RIVER BASIN

03403500 CUMBERLAND RIVER AT BARBOURVILLE, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	2210	115	697	2000	85	466	808	11	25
2	2200	78	465	3250	252	2440	725	10	20
3	2170	30	178	3330	211	1950	750	15	29
4	3760	296	4240	2460	77	518	663	13	23
5	7350	361	7160	3130	131	1460	638	10	18
6	5370	111	1630	12400	1100	36800	1510	84	566
7	3540	74	711	11100	274	8220	6130	942	16000
8	3040	91	758	7710	126	2620	3750	405	4180
9	3250	222	1970	4660	150	1810	5630	526	10100
10	2860	53	410	3830	158	1640	8450	673	15400
11	2520	11	79	3220	87	756	4470	180	2240
12	2260	3	20	2820	65	495	2540	131	898
13	2030	3	17	2470	54	356	5230	815	12200
14	1800	3	13	2160	47	272	5750	361	5760
15	1780	26	128	2230	76	481	10600	482	20400
16	1730	7	35	2260	89	547	29500	1550	123000
17	1550	3	13	1870	45	227	24700	362	24100
18	1430	4	16	1640	29	127	15900	189	8100
19	1350	4	16	1460	19	75	10100	118	3220
20	1220	5	18	2010	106	708	7130	128	2460
21	1110	5	15	3020	278	2300	3620	234	2280
22	1020	8	23	2390	84	544	2400	175	1140
23	955	11	28	3240	302	2740	2760	207	1600
24	918	9	23	2850	86	668	2490	78	527
25	875	9	21	2230	66	398	2040	55	300
26	844	8	19	1870	56	280	1710	49	225
27	773	7	14	1680	49	224	1510	41	169
28	1310	44	173	1500	36	147	1510	46	195
29	1380	38	143	1260	25	86	1550	79	333
30	1640	69	318	1100	19	58	1170	49	155
31	---	---	---	969	15	38	---	---	---
TOTAL	64245	---	19351	98119	---	69451	165734	---	255663
		JULY			AUGUST			SEPTEMBER	
1	1570	337	1690	921	133	358	1950	372	2010
2	2100	1080	6370	1310	205	735	1920	590	3080
3	1570	456	1960	1040	66	189	1310	368	1320
4	1520	173	709	719	34	67	925	158	402
5	1930	498	2660	546	27	40	720	61	119
6	1740	223	1060	512	32	44	572	49	75
7	2030	159	887	517	25	35	514	37	52
8	3410	410	3940	506	18	25	475	34	44
9	2260	177	1090	418	17	19	427	31	36
10	1660	63	286	340	13	12	395	35	37
11	1250	31	104	292	10	8.2	420	45	51
12	1040	29	83	251	8	5.7	458	44	55
13	1210	83	289	226	7	4.5	397	20	22
14	1060	44	132	211	7	4.0	382	18	18
15	855	21	48	214	14	8.3	498	78	146
16	725	17	34	271	39	29	4720	774	13200
17	634	15	26	260	28	20	5010	556	8160
18	536	7	11	276	31	24	2300	196	1230
19	479	5	6.4	295	13	10	1680	99	455
20	456	4	5.3	334	20	20	1280	45	161
21	480	19	25	317	18	15	938	26	66
22	456	19	24	280	24	19	1570	99	686
23	421	13	15	321	33	30	7310	522	10300
24	438	36	43	1150	393	1490	6420	216	3740
25	396	8	8.1	1600	487	2170	2990	87	729
26	343	8	7.3	1690	404	2200	2850	77	613
27	301	5	4.4	2030	542	3160	2830	81	618
28	437	41	52	1220	239	784	2210	64	379
29	678	100	186	840	178	405	1760	50	239
30	542	56	82	3600	1060	16500	1600	50	229
31	684	92	173	5390	2400	39400	---	---	---
TOTAL	33211	---	22010.5	27897	---	67830.7	56831	---	48272
YEAR	882258		838593.81						

03403910 CLEAR FORK AT SAXTON, KY

LOCATION.--Lat 36°38'02", long 84°06'42", Whitley County, Hydrologic Unit 05130101, on right bank at upstream side of bridge on State Highway 471, at Saxton, 100 ft upstream from Louisville and Nashville Railroad bride, 150 ft downstream from unnamed stream, 7.2 mi southeast of Williamsburg, and at mile 17.2.

DRAINAGE AREA.--331 mi^2.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 921.83 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: May 1-18, July 17-30, and Aug. 1-7. Records good except for estimated daily discharges, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--21 years, 556 ft^3/s, 22.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,800 ft^3/s, Apr. 5, 1977, gage height, 41.51 ft, from floodmarks; minimum daily discharge, 3.3 ft^3/s, Aug. 19, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1929 reached a stage of 41.7 ft and 38.4 ft, respectively, from floodmarks; flood of 1957 reached a stage of 39.6 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1900	4,850	18.66	May 6	Unknown	Unknown	Unknown
Dec. 25	0100	5,000	19.01	June 9	1900	4,070	16.87
Jan. 13	0800	8,470	25.26	June 16	1300	*17,100	*36.19
Feb. 21	2200	7,690	23.99	Sept. 23	1500	5,520	20.13
Mar. 6	1900	10,100	27.61				

Minimum daily discharge, 33 ft^3/s, Oct. 14-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	62	404	1120	248	673	635	650	231	448	1800	213
2	62	58	328	1130	236	628	556	900	230	356	900	249
3	70	51	271	886	253	614	611	1300	252	361	500	219
4	64	50	239	680	333	567	1340	780	209	468	280	175
5	56	806	207	529	345	823	2220	730	212	462	230	147
6	49	1190	187	1040	505	7920	1410	3900	822	442	350	127
7	48	602	175	1460	624	5780	1070	2500	2120	1400	280	122
8	43	344	164	2250	568	1680	993	1900	972	1530	217	111
9	41	245	155	1990	476	1200	1080	1400	2730	788	180	101
10	40	250	149	1220	396	937	890	1100	2510	485	156	99
11	39	489	140	932	416	780	754	890	1130	401	139	255
12	37	324	124	4340	375	676	646	750	760	513	127	183
13	37	256	124	7620	340	581	557	650	1590	335	115	148
14	33	206	122	2890	1090	526	482	580	1120	343	108	154
15	33	169	119	3750	2350	466	566	750	3390	284	134	338
16	33	153	113	2430	1520	398	526	1300	15500	240	161	1660
17	33	255	104	1440	1640	347	442	750	10300	200	125	722
18	36	255	95	1070	2240	361	404	450	2360	180	186	376
19	41	481	90	843	1730	468	383	307	1190	170	158	259
20	43	3710	106	694	1680	406	357	586	1110	160	120	203
21	47	2260	280	574	5660	1340	331	634	1210	150	104	169
22	73	878	884	488	5000	1590	305	440	952	170	106	1360
23	69	558	1230	433	1820	1110	288	508	1620	160	116	4940
24	57	401	2380	392	1220	941	283	398	1540	150	753	2630
25	54	315	3740	355	952	758	279	335	874	140	1270	667
26	58	264	1360	325	846	652	252	298	595	130	1140	1760
27	57	382	862	311	763	562	232	680	454	120	592	1210
28	59	702	767	278	726	498	220	545	485	110	324	552
29	63	675	806	261	---	448	300	372	747	160	239	582
30	77	524	690	268	---	428	376	302	477	250	301	1280
31	67	---	677	277	---	607	---	258	---	451	312	---
TOTAL	1589	16915	17092	42276	34352	34765	18788	26943	57692	11557	11523	21211
MEAN	51.3	564	551	1364	1227	1121	626	869	1923	373	372	707
MAX	77	3710	3740	7620	5660	7920	2220	3900	15500	1530	1800	4940
MIN	33	50	90	261	236	347	220	258	209	110	104	99
CFSM	.15	1.70	1.67	4.12	3.71	3.39	1.89	2.63	5.81	1.13	1.12	2.14
IN.	.18	1.90	1.92	4.75	3.86	3.91	2.11	3.03	6.48	1.30	1.30	2.38

CAL YR 1988 TOTAL 111335.4 MEAN 304 MAX 7410 MIN 3.3 CFSM .92 IN. 12.51
WTR YR 1989 TOTAL 294703 MEAN 807 MAX 15500 MIN 33 CFSM 2.44 IN. 33.12

03404000 CUMBERLAND RIVER AT WILLIAMSBURG, KY

LOCATION.--Lat 36°44'38", long 84°09'30", Whitley County, Hydrologic Unit 05130101, on left bank 10 ft downstream from bridge on State Highway 296 at Williamsburg, 2.1 mi downstream from Clear Fork, and at mile 590.3.

DRAINAGE AREA.--1,607 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to current year. Gage-height records collected in this vicinity since 1908 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 1436: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 891.57 ft above National Geodetic Vertical Datum of 1929. Prior to July 2, 1951, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow slightly regulated by Martins Fork Dam (station 03400798) beginning January 1979.

AVERAGE DISCHARGE.--39 years, 2,673 ft^3/s, 22.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,700 ft^3/s, Jan. 31, 1957, gage height, 33.78 ft; maximum gage height, 35.03 ft, Apr. 7, 1977; minimum discharge, 6.1 ft^3/s, Oct. 23, 25, 26, 27, 1953, gage height, 1.64 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1918, 34.2 ft, Jan. 10, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 20,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	2300	22,700	22.03	Mar. 7	1200	24,800	23.31
Feb. 22	1200	21,900	21.53	June 17	0800	*33,100	*28.00

Minimum discharge, 145 ft^3/s, Oct. 17, 18, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	261	2370	3120	1460	3670	2870	3070	1180	1930	2550	4320
2	283	253	1870	3420	1360	3280	3080	4130	1010	2230	6070	2510
3	265	241	1520	3130	1470	3080	3050	4850	972	2500	2610	2220
4	267	232	1280	2800	2550	2920	4470	4030	957	2550	1530	1490
5	255	931	1080	2370	3930	3780	9100	4140	877	3320	1050	1080
6	237	3240	962	3100	4150	17000	8880	12200	1350	3140	897	856
7	215	3220	874	6290	3950	24100	6400	15800	5740	3680	1030	727
8	206	2100	784	8020	3770	19500	5100	14300	6640	5470	824	655
9	193	1390	728	9190	3330	13900	4960	9220	6890	4490	719	601
10	184	1130	701	7310	2780	6570	4670	6160	11200	2990	594	558
11	175	1460	687	5320	2490	4470	4030	5110	8790	2180	504	1080
12	172	1610	638	9490	2280	3670	3490	4290	4920	1980	444	1140
13	166	1290	560	20600	2040	3160	3030	3720	5640	1540	401	790
14	160	1040	533	21300	3640	2830	2670	3100	7420	1630	368	644
15	154	897	522	21200	9920	2570	2560	3310	11200	1350	363	831
16	148	811	534	19300	9490	2270	2630	3630	27800	1080	467	3410
17	146	921	523	15100	7650	1980	2340	2960	32700	922	447	6650
18	145	1460	472	8860	8290	1780	2100	2400	28600	821	485	4660
19	145	1820	439	5410	7980	1890	1960	2070	23900	744	508	2640
20	149	6240	421	4210	7160	2170	1840	2350	19700	679	448	1920
21	170	10500	658	3470	14900	3770	1660	3760	11800	635	441	1460
22	186	7120	2420	2810	21300	7680	1520	3840	4850	653	446	3530
23	271	3730	4680	2420	18800	7470	1400	3680	4290	602	403	12500
24	318	2420	7930	2190	14900	5690	1320	4330	5130	585	933	12900
25	286	1810	13500	2000	7870	4640	1280	3450	3610	594	2940	7160
26	259	1480	12500	1840	5130	3890	1190	2680	2730	526	3130	5630
27	249	1480	7350	1740	4390	3380	1100	2490	2240	462	2950	5420
28	257	2370	4240	1640	4040	2950	1070	2410	2160	416	2310	4110
29	257	3560	3900	1480	---	2550	1710	1920	2660	521	1430	3290
30	257	3130	3430	1370	---	2300	1970	1590	2180	782	1390	3630
31	261	---	3010	1420	---	2410	---	1370	---	1190	5600	---
TOTAL	6770	68147	81116	201920	181020	171320	93450	142360	249136	52192	44282	98412
MEAN	218	2272	2617	6514	6465	5526	3115	4592	8305	1684	1428	3280
MAX	334	10500	13500	21300	21300	24100	9100	15800	32700	5470	6070	12900
MIN	145	232	421	1370	1360	1780	1070	1370	877	416	363	558
CFSM	.14	1.41	1.63	4.05	4.02	3.44	1.94	2.86	5.17	1.05	.89	2.04
IN.	.16	1.58	1.88	4.67	4.19	3.97	2.16	3.30	5.77	1.21	1.03	2.28

CAL YR 1988 TOTAL 520157 MEAN 1421 MAX 18300 MIN 89 CFSM .88 IN. 12.04
WTR YR 1989 TOTAL 1390125 MEAN 3809 MAX 32700 MIN 145 CFSM 2.37 IN. 32.18

03404000 CUMBERLAND RIVER AT WILLIAMSBURG, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948-72, 1978 to August 1981, October 1983 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1962.
WATER TEMPERATURES: October 1951 to September 1962, May to September 1980.
SUSPENDED-SEDIMENT DISCHARGE: October 1953 to September 1962, November 1979 to August 1981, October 1983 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 754 microsiemens, Dec. 11, 1953; minimum daily, 60 microsiemens, Mar. 24, 25, 1952.
WATER TEMPERATURES: Maximum daily, 33.0°C, on several days during June and July 1952; minimum daily, 0.0°C, Jan. 9, 1958, Mar. 13, 1960.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,170 mg/L, July 5, 1980; minimum daily mean, 0 mg/L, Nov. 28, 1987.
SEDIMENT LOADS: Maximum daily, 131,000 tons, May 7, 1984; minimum daily, 0.21 ton, Nov. 28, 1987.

EXTREMES FOR CURRENT YEAR.--
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,710 mg/L, Sept. 17; minimum daily mean, 1 mg/L, July 23.
SEDIMENT LOADS: Maximum daily, 111,000 tons, June 16; minimum daily, 1.2 tons, Oct. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM
OCT								
05...	1415	261	435	17.0	20	14	--	--
NOV								
16...	1150	772	330	11.5	13	27	--	--
JAN								
03...	1310	3120	273	9.5	28	236	--	--
FEB								
22...	1145	22100	170	10.5	446	26600	--	--
22...	1205	22100	170	10.5	476	28400	35	49
APR								
04...	1420	3710	286	13.5	80	801	--	--
MAY								
17...	1515	3020	310	17.0	53	432	--	--
JUN								
17...	1630	32900	130	17.5	431	38300	--	--
17...	1635	32900	130	17.5	429	38100	56	75
29...	1605	2760	375	24.0	110	820	--	--
AUG								
08...	1540	809	387	24.0	22	48	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .008 MM	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. FALL DIAM. % FINER THAN .062 MM	SED. SUSP. FALL DIAM. % FINER THAN .125 MM	SED. SUSP. FALL DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	--	--	--	--	--	--	93
NOV							
16...	--	--	--	--	--	--	88
JAN							
03...	--	--	--	--	--	--	86
FEB							
22...	--	--	--	--	--	--	88
22...	65	79	89	96	98	100	--
APR							
04...	--	--	--	--	--	--	88
MAY							
17...	--	--	--	--	--	--	88
JUN							
17...	--	--	--	--	--	--	96
17...	88	95	98	99	100	--	--
29...	--	--	--	--	--	--	94
AUG							
08...	--	--	--	--	--	--	81

CUMBERLAND RIVER BASIN

03404000 CUMBERLAND RIVER AT WILLIAMSBURG, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	334	25	23	261	5	3.3	2370	25	158
2	283	25	19	253	4	3.0	1870	19	96
3	265	24	17	241	4	2.6	1520	15	62
4	267	23	17	232	4	2.7	1280	11	37
5	255	21	14	931	91	344	1080	7	20
6	237	17	11	3240	385	3550	962	5	13
7	215	14	8.4	3220	195	1730	874	5	11
8	206	14	7.5	2100	82	478	784	5	11
9	193	12	6.5	1390	37	140	728	5	8.9
10	184	11	5.7	1130	28	87	701	7	13
11	175	10	5.0	1460	45	185	687	10	18
12	172	9	4.2	1610	70	306	638	8	14
13	166	8	3.4	1290	32	111	560	5	8.3
14	160	6	2.7	1040	21	60	533	4	6.1
15	154	6	2.4	897	18	43	522	3	4.8
16	148	6	2.3	811	16	35	534	5	7.4
17	146	5	2.1	921	19	49	523	5	7.5
18	145	4	1.7	1460	41	173	472	5	6.3
19	145	4	1.4	1820	54	271	439	5	5.6
20	149	3	1.2	6240	536	10800	421	6	6.5
21	170	5	2.3	10500	556	15800	658	6	14
22	186	5	2.7	7120	287	5640	2420	90	680
23	271	9	6.9	3730	174	1770	4680	229	2980
24	318	10	8.4	2420	107	706	7930	368	7880
25	286	8	6.1	1810	60	291	13500	618	22600
26	259	7	4.7	1480	30	121	12500	365	12500
27	249	6	4.2	1480	15	61	7350	146	2930
28	257	6	4.1	2370	35	243	4240	77	889
29	257	6	4.0	3560	77	736	3900	34	359
30	257	6	3.8	3130	39	331	3430	41	376
31	261	5	3.8	---	---	---	3010	28	226
TOTAL	6770	---	206.5	68147	---	44072.6	81116	---	51948.4
		JANUARY			FEBRUARY			MARCH	
1	3120	98	876	1460	24	95	3670	20	194
2	3420	83	772	1360	11	40	3280	18	160
3	3130	28	235	1470	15	62	3080	18	147
4	2800	13	101	2550	143	1130	2920	16	124
5	2370	8	54	3930	325	3400	3780	118	1640
6	3100	48	477	4150	63	707	17000	1500	77100
7	6290	228	4020	3950	37	393	24100	1260	81500
8	8020	326	7320	3770	26	262	19500	227	12100
9	9190	262	6550	3330	20	182	13900	80	3080
10	7310	92	1840	2780	15	114	6570	46	826
11	5320	56	810	2490	10	66	4470	37	448
12	9490	271	9820	2280	5	33	3670	30	294
13	20600	757	42600	2040	4	24	3160	25	214
14	21300	513	30600	3640	244	3760	2830	21	163
15	21200	165	9470	9920	601	15500	2570	18	128
16	19300	118	6090	9490	184	4780	2270	15	95
17	15100	82	3340	7650	66	1370	1980	13	68
18	8860	63	1490	8290	72	1620	1780	9	46
19	5410	50	732	7980	28	597	1890	22	116
20	4210	37	421	7160	29	580	2170	25	147
21	3470	29	267	14900	1250	58200	3770	194	2630
22	2810	22	164	21300	439	25300	7680	368	7320
23	2420	16	105	18800	218	11100	7470	133	2730
24	2190	12	74	14900	91	3770	5690	46	716
25	2000	10	54	7870	60	1270	4640	29	369
26	1840	10	49	5130	42	589	3890	24	248
27	1740	9	42	4390	27	321	3380	18	162
28	1640	8	37	4040	22	240	2950	15	119
29	1480	8	31	---	---	---	2550	13	87
30	1370	8	30	---	---	---	2300	10	62
31	1420	32	125	---	---	---	2410	27	183
TOTAL	201920	---	128596	181020	---	135505	171320	---	193216

03404000 CUMBERLAND RIVER AT WILLIAMSBURG, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	2870	75	591	3070	86	764	1180	20	64
2	3080	121	1010	4130	136	1530	1010	16	44
3	3050	54	447	4850	377	4960	972	13	34
4	4470	107	1510	4030	120	1340	957	11	29
5	9100	270	6540	4140	52	628	877	10	23
6	8880	113	2780	12200	526	20000	1350	59	286
7	6400	34	606	15800	1010	43000	5740	828	14900
8	5100	16	219	14300	132	5180	6640	530	9960
9	4960	74	1000	9220	57	1430	6890	615	13800
10	4670	42	530	6160	60	991	11200	621	18500
11	4030	16	180	5110	54	749	8790	183	4420
12	3490	8	79	4290	45	516	4920	132	1740
13	3030	7	53	3720	38	378	5640	372	6400
14	2670	6	41	3100	32	271	7420	520	10400
15	2560	11	77	3310	62	577	11200	379	14100
16	2630	32	231	3630	105	1030	27800	1470	111000
17	2340	10	62	2960	54	434	32700	885	77900
18	2100	9	53	2400	30	194	28600	254	19800
19	1960	12	66	2070	26	147	23900	170	11000
20	1840	9	45	2350	44	302	19700	119	6330
21	1660	6	27	3760	190	2010	11800	95	2970
22	1520	6	23	3840	124	1310	4850	129	1640
23	1400	5	21	3680	170	1780	4290	180	2320
24	1320	5	19	4330	219	2560	5130	247	3610
25	1280	5	17	3450	94	891	3610	103	1000
26	1190	4	14	2680	54	391	2730	80	594
27	1100	4	11	2490	70	480	2240	68	411
28	1070	5	14	2410	93	618	2160	86	516
29	1710	62	290	1920	40	210	2660	121	882
30	1970	60	316	1590	28	121	2180	90	532
31	---	---	---	1370	24	88	---	---	---
TOTAL	93450	---	16872	142360	---	94880	249136	---	335205
		JULY			AUGUST			SEPTEMBER	
1	1930	83	452	2550	264	1920	4320	842	9350
2	2230	130	798	6070	415	7260	2510	575	3910
3	2500	151	1030	2610	92	664	2220	254	1580
4	2550	179	1360	1530	47	199	1490	92	372
5	3320	346	3120	1050	30	84	1080	65	189
6	3140	174	1480	897	28	67	856	47	109
7	3680	229	2500	1030	43	120	727	32	63
8	5470	566	8420	824	17	38	655	22	39
9	4490	296	3650	719	8	16	601	16	27
10	2990	158	1290	594	6	9.0	558	16	24
11	2180	83	493	504	4	5.4	1080	157	601
12	1980	49	265	444	4	4.2	1140	177	557
13	1540	22	93	401	3	3.3	790	87	188
14	1630	56	249	368	3	3.3	644	41	72
15	1350	62	229	363	3	2.9	831	170	509
16	1080	44	127	467	7	8.8	3410	757	7260
17	922	35	86	447	2	2.1	6650	1710	31200
18	821	26	57	485	5	6.7	4660	477	6390
19	744	12	23	508	7	9.8	2640	162	1170
20	679	6	12	448	2	2.8	1920	73	381
21	635	3	4.3	441	5	6.4	1460	42	166
22	653	2	3.9	446	8	10	3530	234	3460
23	602	1	1.9	403	3	3.6	12500	577	20900
24	585	15	25	933	68	388	12900	351	12900
25	584	24	39	2940	370	2990	7160	148	2900
26	526	6	8.3	3130	464	3970	5630	89	1360
27	482	3	3.9	2950	288	2300	5420	74	1080
28	416	2	2.1	2310	169	1080	4110	61	679
29	521	8	13	1430	94	365	3290	49	435
30	782	30	65	1390	279	1490	3630	73	792
31	1180	84	301	5600	1210	18600	---	---	---
TOTAL	52192	---	26201.4	44282	---	41629.3	98412	---	108663
YEAR	1390125		1176995.2						

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY

LOCATION.--Lat 36°50'14", long 84°20'36", McCreary County, Hydrologic Unit 05130101, on left bank 0.1 mi downstream from bridge on State Highway 90, 0.2 mi upstream from Cumberland Falls, and at mile 562.4.

DRAINAGE AREA.--1,977 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1907 to December 1911, October 1914 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1386: 1919. WSP 1436: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 825.49 ft above Sandy Hook datum; 825.28 ft above National Geodetic Vertical Datum of 1929. Aug. 15, 1907 to Dec. 10, 1911, nonrecording gage at site 300 ft downstream at different datum. Apr. 3, 1915 to Sept. 1, 1933, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Flow slightly regulated by Martins Fork Dam (station 03400798) beginning January 1979.

AVERAGE DISCHARGE.--79 years (Water years 1908-11, 1915-89), 3,154 ft^3/s, 21.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft^3/s, Jan. 28, 1918, gage height, 15.5 ft, present site and datum; minimum, 4.0 ft^3/s, Sept. 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 20,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 13	1100	25,700	9.40	June 16	1400	*34,400	*11.02
Feb. 21	2200	26,600	9.58	Sept. 23	1500	22,100	8.67
Mar. 6	2100	31,000	10.41				

Minimum discharge, 127 ft^3/s, Oct. 20, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	267	2960	3520	1650	4210	3270	3920	1460	2510	2560	5450
2	355	256	2330	3940	1620	3740	3490	5040	1280	2260	9250	3040
3	293	239	1920	3690	1730	3490	3590	5280	1160	2780	4230	2580
4	271	233	1630	3310	3050	3270	6380	5090	1160	2740	2230	1950
5	260	576	1400	2820	4310	5840	10500	4230	1150	4070	1530	1430
6	242	3110	1230	3650	4930	27000	10800	12900	1420	4000	1250	1140
7	216	3960	1120	6900	4630	26700	8060	17600	4940	4160	1410	955
8	196	2790	1030	9230	4360	21700	6200	15800	7540	5830	1240	843
9	186	1890	949	10800	3900	16300	5690	11500	6880	5260	1020	770
10	177	1470	893	8840	3260	8640	5430	7330	11400	3660	871	703
11	166	1690	871	6440	2860	5410	4750	5870	10300	2630	728	951
12	156	1920	830	12700	2670	4350	4110	4960	6180	2740	625	3220
13	150	1710	751	24700	2410	3710	3580	4240	6080	2190	549	1760
14	145	1380	689	23200	6390	3270	3160	3610	8010	1860	490	1160
15	143	1170	664	23700	12500	3030	3030	3920	11300	1790	452	1800
16	139	1040	641	21600	11900	2670	3130	4340	31200	1430	508	6220
17	137	1110	646	17000	9850	2370	2900	3750	31600	1220	590	7110
18	137	1450	601	11100	9700	2130	2610	2970	29200	1080	682	6020
19	135	2000	553	6640	9640	2080	2440	2560	24200	990	691	3440
20	131	7050	523	5020	9100	2340	2270	2630	20700	933	636	2410
21	142	12000	601	4080	23400	4450	2090	3800	14700	886	558	1910
22	166	8940	2450	3330	24200	8500	1920	4400	6440	829	551	4530
23	182	4940	6140	2800	20600	9020	1790	4050	4530	809	544	20300
24	270	3070	10400	2530	16900	7040	1690	4720	6210	772	720	16900
25	298	2250	15700	2310	10100	5670	1640	4230	4440	761	2600	9480
26	275	1830	14200	2150	6130	4720	1540	3220	3300	711	3720	6630
27	242	1760	9440	2010	5100	4050	1450	2800	2650	615	3610	6420
28	248	2610	5450	1910	4610	3560	1360	2940	2980	537	2990	4980
29	271	3910	4800	1760	---	3170	1670	2400	3390	504	2010	3830
30	270	3840	4290	1640	---	2830	2120	1940	2830	745	1630	4380
31	267	---	3740	1620	---	2820	---	1650	---	1430	4130	---
TOTAL	6698	80461	99442	234940	221500	208080	112660	163690	268630	62732	54605	132312
MEAN	216	2682	3208	7579	7911	6712	3755	5280	8954	2024	1761	4410
MAX	432	12000	15700	24700	24200	27000	10800	17600	31600	5830	9250	20300
MIN	131	233	523	1620	1620	2080	1360	1650	1150	504	452	703
CFSM	.11	1.36	1.62	3.83	4.00	3.40	1.90	2.67	4.53	1.02	.89	2.23
IN.	.13	1.51	1.87	4.42	4.17	3.92	2.12	3.08	5.05	1.18	1.03	2.49

CAL YR 1988 TOTAL 604600 MEAN 1652 MAX 18900 MIN 128 CFSM .84 IN. 11.38
WTR YR 1989 TOTAL 1645750 MEAN 4509 MAX 31600 MIN 131 CFSM 2.28 IN. 30.97

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1950-77, April 1981 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1981 to current year.
pH: November 1981 to current year.
WATER TEMPERATURE: November 1981 to current year.
DISSOLVED OXYGEN: November 1981 to current year.
TURBIDITY: November 1981 to September 1987.
SUSPENDED-SEDIMENT DISCHARGE: April 1981 to current year.

INSTRUMENTATION.--ISCO automatic sediment pumping sampler since April 1981, and flow-through 5-parameter water-quality monitor since November 1981.

REMARKS.--Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section. Miscellaneous measurement values may fall outside the range observed for that day by the water quality monitor due to minor differences in sampling location.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 850 microsiemens, Oct. 17, 1987; minimum recorded, 67 microsiemens, May 7, 1984.
PH: Maximum recorded, 9.3 units, Nov. 13, 1983; minimum recorded, 6.5 units, Sept. 3, 1982, and Feb. 11, 1984, and Jan. 14, 17, 1989.
WATER TEMPERATURE: Maximum, 35.3°C, Aug. 2, 1988; minimum recorded, 0.0°C on several days during winter periods.
DISSOLVED OXYGEN: Maximum recorded, 18.2 mg/L, Jan. 21, 22, 1984; minimum recorded, 4.6 mg/L, July 10, 1988.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,500 mg/L, June 16, 1989; minimum daily mean, 0 mg/L, on many days in 1986-89.
SEDIMENT LOADS: Maximum daily, 301,000 tons, June 16, 1989; minimum daily, 0.05 ton, Dec. 21, 22, 1987.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 565 microsiemens, Nov. 3,4; minimum, 111 microsiemens, Sept. 16.
pH: Maximum, 8.73 units, Oct. 12, 13; minimum, 6.46 units, Jan. 14, 17.
WATER TEMPERATURE: Maximum, 29.2°C, Aug. 22; minimum, 0.0°C, Dec. 18.
DISSOLVED OXYGEN: Maximum, 13.6 mg/L, Dec. 18, 19; minimum, 6.6 mg/L, Aug. 23, 24.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,500 mg/L, June 16; minimum daily mean, 0 mg/L, Nov. 2, Apr. 17.
SEDIMENT LOADS: Maximum daily, 301,000 tons, June 16; minimum daily, 0.28 ton, Nov. 2.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
04...	1240	263	378	17.0	6	4.3	92
DEC							
08...	1120	1050	290	4.5	4	11	65
FEB							
01...	1420	1680	387	9.0	7	32	85
MAR							
02...	1430	4000	--	6.5	19	205	86
APR							
11...	1210	4690	236	8.0	28	355	84
MAY							
24...	1125	4950	261	18.5	60	802	84
JUN							
30...	1315	2830	319	23.0	125	955	88
AUG							
22...	1125	565	471	25.5	1	1.5	22

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	412	380	549	545	259	251	223	217	373	365	255	235
2	380	376	553	549	243	239	234	223	376	373	286	247
3	376	376	565	553	247	243	230	225	369	337	286	282
4	376	373	565	537	255	247	239	228	325	290	290	286
5	388	376	533	412	263	255	238	235	322	286	290	137
6	396	388	435	369	275	263	238	208	282	263	141	137
7	400	396	388	361	282	275	235	212	263	251	153	141
8	404	400	361	329	294	286	235	196	251	243	157	149
9	408	400	333	325	302	294	200	196	247	231	153	149
10	412	408	325	306	310	302	200	192	247	235	157	153
11	420	412	302	286	322	310	200	196	---	---	165	157
12	424	420	310	298	329	322	200	157	---	---	169	161
13	431	424	318	310	337	329	157	149	---	---	184	169
14	435	427	314	306	349	337	161	157	---	---	220	184
15	439	435	325	314	353	349	165	161	---	---	302	216
16	443	435	329	314	361	353	161	161	---	---	314	302
17	443	435	310	290	373	361	176	161	---	---	322	314
18	455	439	318	290	384	373	176	176	---	---	329	322
19	455	451	333	318	392	380	235	221	---	---	337	329
20	459	455	318	200	396	388	255	243	---	---	345	337
21	455	447	227	196	396	373	275	259	---	---	341	259
22	455	451	227	208	369	333	286	275	---	---	267	255
23	455	447	216	208	341	216	306	286	---	---	259	200
24	498	451	224	216	220	169	302	298	---	---	200	200
25	518	498	231	227	184	169	333	325	---	---	208	196
26	537	522	247	243	184	173	337	333	---	---	224	208
27	537	533	251	242	188	169	345	341	---	---	239	216
28	533	525	255	243	183	175	357	345	---	---	251	239
29	537	510	278	255	204	182	357	353	---	---	259	251
30	537	518	274	260	212	204	357	357	---	---	267	259
31	549	541	---	---	218	211	365	357	---	---	267	263
MONTH	549	373	565	196	396	169	365	149	---	---	345	137
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	290	267	376	294	331	315	330	315	---	---	244	220
2	298	290	294	263	339	332	327	306	---	---	276	225
3	298	282	271	259	349	340	378	329	288	207	248	222
4	282	165	263	220	358	349	390	311	327	292	225	214
5	220	180	220	196	---	---	299	276	306	295	239	221
6	204	184	200	173	---	---	293	262	297	273	253	240
7	184	180	184	141	---	---	297	278	313	266	265	253
8	200	184	141	141	---	---	303	254	332	317	276	265
9	224	200	184	165	---	---	281	248	352	332	291	276
10	239	224	204	188	---	---	290	248	371	354	308	292
11	239	231	224	204	---	---	246	240	372	367	318	245
12	235	231	243	224	---	---	263	241	367	366	248	185
13	243	235	243	239	---	---	274	242	372	367	242	211
14	251	243	251	243	---	---	---	---	389	373	286	232
15	251	247	251	227	---	---	---	---	403	390	266	200
16	271	251	263	231	161	121	---	---	409	393	242	111
17	275	271	267	243	129	120	---	---	425	408	368	222
18	286	275	232	200	142	129	---	---	430	388	346	204
19	290	286	201	200	152	143	---	---	442	393	202	194
20	294	286	207	201	---	---	---	---	461	437	207	202
21	298	294	200	200	---	---	---	---	460	443	218	166
22	302	298	200	200	---	---	---	---	477	458	227	134
23	310	302	262	259	---	---	---	---	479	443	149	122
24	314	310	259	238	---	---	---	---	454	418	196	152
25	322	314	251	235	---	---	---	---	485	405	198	175
26	333	322	247	237	297	295	---	---	---	---	190	175
27	341	333	255	247	309	296	---	---	---	---	200	192
28	353	345	285	256	---	---	---	---	---	---	223	200
29	361	349	292	286	---	---	---	---	---	---	223	221
30	376	365	297	289	332	321	---	---	---	---	220	200
31	---	---	314	298	---	---	---	---	---	---	---	---
MONTH	376	165	376	141	---	---	---	---	---	---	368	111

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.16	7.53	8.08	7.53	7.21	7.11	7.10	6.94	7.96	7.77	7.22	7.18
2	8.28	7.57	8.16	7.65	7.28	7.22	7.02	6.94	7.88	7.73	7.26	7.06
3	8.16	7.61	8.16	7.73	7.41	7.28	7.14	7.02	7.84	7.69	7.29	7.18
4	8.54	7.73	8.20	7.73	7.47	7.34	7.18	6.98	7.69	7.61	7.29	7.18
5	8.58	7.84	8.11	7.35	7.49	7.40	7.33	7.10	7.73	7.69	7.18	6.79
6	8.62	7.92	7.31	7.18	7.52	7.42	7.77	7.10	7.61	7.61	6.79	6.71
7	8.62	7.88	7.28	7.18	7.58	7.44	7.39	7.13	7.65	7.53	6.71	6.63
8	8.69	7.96	7.28	7.16	7.60	7.44	7.44	7.19	7.61	7.53	6.71	6.59
9	8.65	8.00	7.38	7.26	7.67	7.46	7.18	6.84	7.61	7.53	6.75	6.71
10	8.65	7.92	7.52	7.29	7.61	7.55	7.14	6.79	7.69	7.45	6.75	6.67
11	8.61	8.00	7.51	7.27	7.75	7.54	7.06	6.84	---	---	6.79	6.63
12	8.73	8.11	7.34	7.25	7.78	7.68	7.15	6.79	---	---	6.75	6.63
13	8.73	8.35	7.48	7.25	7.80	7.63	6.97	6.70	---	---	6.71	6.67
14	8.64	6.78	7.62	7.31	7.80	7.57	6.82	6.46	---	---	6.75	6.67
15	8.52	8.25	7.64	7.29	7.80	7.49	6.82	6.54	---	---	7.26	6.63
16	8.44	8.18	7.48	7.24	7.88	7.69	6.95	6.78	---	---	7.41	7.22
17	8.42	7.98	7.89	7.27	7.96	7.73	7.01	6.46	---	---	7.49	7.26
18	8.31	7.92	7.69	7.22	7.96	7.84	7.10	6.62	---	---	7.49	7.26
19	8.43	7.65	7.26	7.18	7.96	7.80	7.07	7.02	---	---	7.57	7.33
20	8.48	8.29	7.18	6.67	8.00	7.73	7.05	6.99	---	---	7.45	7.29
21	8.30	7.71	6.82	6.71	7.77	7.57	7.09	7.00	---	---	7.33	7.02
22	8.31	7.48	7.14	6.82	7.69	7.37	7.03	6.90	---	---	7.06	6.90
23	8.31	7.84	6.94	6.90	7.41	7.06	7.53	7.03	---	---	7.22	6.86
24	8.21	7.49	7.02	6.94	7.10	6.79	7.61	7.33	---	---	7.10	6.82
25	8.09	7.62	7.06	7.02	7.02	6.71	7.61	7.41	---	---	6.94	6.79
26	8.35	7.43	7.10	7.06	6.80	6.59	7.53	7.45	---	---	6.90	6.75
27	8.31	7.84	7.09	7.01	7.10	6.71	7.65	7.53	---	---	7.26	6.71
28	8.24	7.65	7.06	6.99	7.18	6.67	7.77	7.65	---	---	7.37	7.14
29	8.24	7.65	7.15	7.06	7.18	7.02	7.80	7.69	---	---	7.45	6.75
30	8.12	7.65	7.27	7.12	7.33	6.98	7.84	7.73	---	---	7.45	7.22
31	7.92	7.53	---	---	7.22	7.06	7.92	7.73	---	---	7.33	7.22
MONTH	8.73	6.78	8.20	6.67	8.00	6.59	7.92	6.46	---	---	7.57	6.59
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.45	7.22	7.37	7.10	7.91	7.32	7.38	7.35	---	---	7.73	7.18
2	7.45	7.26	7.18	7.14	7.94	7.35	7.43	7.35	---	---	7.49	7.35
3	7.45	7.29	7.26	7.18	7.98	7.39	7.53	7.42	7.38	7.15	7.44	7.41
4	7.29	6.94	7.26	7.22	7.96	7.39	7.53	7.41	7.58	7.38	7.49	7.43
5	7.06	6.94	7.22	7.10	---	---	7.39	7.31	7.80	7.46	7.58	7.49
6	7.22	7.06	7.06	6.90	---	---	7.35	7.24	7.85	7.48	7.64	7.53
7	7.10	7.06	7.14	6.90	---	---	7.34	7.25	7.77	7.45	7.76	7.55
8	7.10	7.06	6.98	6.94	---	---	7.34	7.26	8.18	7.57	7.91	7.57
9	7.18	7.10	6.94	6.90	---	---	7.37	7.27	8.33	7.63	8.02	7.59
10	7.22	7.14	7.06	6.94	---	---	7.48	7.24	8.44	7.67	8.13	7.62
11	7.29	7.22	7.14	7.06	---	---	7.46	7.41	8.57	7.71	8.00	7.37
12	7.33	7.22	7.22	7.14	---	---	7.45	7.33	8.61	7.78	7.27	6.96
13	7.37	7.22	7.26	7.22	---	---	7.50	7.34	8.61	7.84	7.35	7.12
14	7.37	7.22	7.29	7.22	---	---	---	---	8.54	7.88	7.55	7.27
15	7.37	7.22	7.26	7.14	---	---	---	---	8.38	7.86	7.41	7.19
16	7.45	7.22	7.18	7.10	6.85	6.66	---	---	8.32	7.78	7.34	6.76
17	7.53	7.26	7.37	7.18	6.72	6.69	---	---	8.23	7.76	7.45	7.16
18	7.65	7.22	7.45	7.29	6.71	6.67	---	---	8.16	7.76	7.59	7.39
19	7.69	7.29	7.45	7.29	6.72	6.69	---	---	8.21	7.75	7.38	7.35
20	7.84	7.33	7.53	7.37	---	---	---	---	8.25	7.74	7.57	7.38
21	7.96	7.33	7.57	7.33	---	---	---	---	8.24	7.75	7.60	7.48
22	8.00	7.33	7.65	7.45	---	---	---	---	8.23	7.76	7.66	6.86
23	7.88	7.29	7.61	7.53	---	---	---	---	8.12	7.77	6.84	6.75
24	7.92	7.29	7.57	7.22	---	---	---	---	7.98	7.71	7.01	6.84
25	8.12	7.29	7.22	7.18	---	---	---	---	7.73	7.51	7.03	6.94
26	8.12	7.33	7.26	7.22	7.42	7.18	---	---	7.71	7.42	6.95	6.92
27	8.12	7.33	7.33	7.22	7.43	7.23	---	---	7.72	7.40	6.96	6.94
28	8.08	7.33	7.37	7.25	---	---	---	---	7.72	7.49	6.99	6.79
29	7.77	7.33	7.46	7.29	---	---	---	---	7.75	7.52	6.99	6.93
30	7.77	7.29	7.58	7.29	7.62	7.34	---	---	7.71	7.53	6.93	6.76
31	---	---	7.75	7.31	---	---	---	---	7.79	7.54	---	---
MONTH	8.12	6.94	7.75	6.90	---	---	---	---	---	---	8.13	6.75

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.7	21.2	12.7	10.2	7.2	6.8	---	---	9.6	7.0	6.2	4.7
2	22.3	21.0	11.7	9.4	6.4	5.8	---	---	9.6	8.6	6.6	4.9
3	21.4	19.2	11.7	8.8	7.2	5.3	---	---	9.8	8.4	7.8	5.5
4	20.2	16.1	13.5	11.0	7.0	5.7	---	---	8.4	7.6	9.0	7.0
5	18.6	15.5	---	---	7.0	5.1	---	---	---	---	---	---
6	17.6	13.9	---	---	6.4	4.5	---	---	---	---	---	---
7	17.4	13.9	---	---	7.2	4.9	---	---	---	---	---	---
8	16.8	12.9	---	---	6.2	4.3	---	---	---	---	---	---
9	17.0	13.1	---	---	4.7	3.3	---	---	---	---	---	---
10	16.8	14.3	---	---	3.9	1.9	---	---	---	---	---	---
11	17.4	13.7	11.0	9.6	3.3	1.9	---	---	---	---	---	---
12	15.7	12.5	10.2	8.6	2.5	.4	---	---	---	---	---	---
13	14.7	11.0	11.3	9.8	2.1	1.3	---	---	---	---	---	---
14	14.5	9.8	11.0	8.8	3.5	.9	---	---	---	---	17.6	13.1
15	15.7	11.3	10.8	8.8	3.9	2.7	---	---	---	---	18.4	11.9
16	15.5	12.3	12.3	10.2	3.1	1.7	---	---	---	---	13.7	11.0
17	17.8	13.7	11.3	9.2	2.1	1.3	---	---	---	---	14.3	10.8
18	16.8	16.1	10.2	8.2	1.5	.0	---	---	---	---	14.3	12.9
19	16.6	13.9	10.0	9.4	3.1	.4	---	---	---	---	14.3	11.5
20	15.5	12.7	---	---	5.8	2.1	---	---	---	---	12.7	11.9
21	14.3	12.9	---	---	6.4	6.0	---	---	---	---	12.1	10.8
22	14.3	12.1	---	---	8.0	5.8	---	---	---	---	---	---
23	12.5	10.6	---	---	---	---	---	---	---	---	---	---
24	13.1	11.1	---	---	---	---	---	---	---	---	---	---
25	11.7	9.8	---	---	---	---	---	---	---	---	---	---
26	11.7	9.0	---	---	---	---	6.0	5.3	---	---	---	---
27	11.7	7.6	---	---	---	---	7.0	5.5	---	---	---	---
28	11.9	11.0	---	---	---	---	7.0	4.9	---	---	---	---
29	11.7	9.2	---	---	---	---	7.2	6.2	---	---	17.0	15.7
30	11.1	9.6	---	---	---	---	8.0	7.2	---	---	16.8	15.7
31	10.6	9.6	---	---	---	---	8.6	6.2	---	---	16.1	13.7
MONTH	22.7	7.6	---	---	---	---	---	---	---	---	---	---

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.9	12.9	21.2	18.2	26.5	22.8	24.3	23.4	---	---	24.7	23.6
2	14.5	12.5	18.0	16.6	25.0	24.0	23.5	22.7	---	---	24.9	23.5
3	14.7	12.7	17.4	15.9	25.4	24.0	23.9	22.5	25.1	22.4	25.2	22.9
4	13.9	13.1	15.9	14.5	25.3	23.2	23.5	22.1	27.5	23.9	25.3	22.8
5	13.7	12.9	14.3	14.1	---	---	22.9	21.7	28.1	25.1	25.8	22.9
6	13.1	12.3	13.9	13.1	---	---	23.1	22.0	27.0	25.4	25.5	23.5
7	12.3	11.1	13.1	12.1	---	---	23.7	22.2	25.2	23.2	26.6	23.3
8	11.1	10.2	12.1	11.5	---	---	24.1	22.8	25.4	21.9	27.6	23.6
9	10.2	9.6	12.7	12.1	---	---	24.7	22.9	26.0	21.4	27.7	24.1
10	9.8	8.8	13.7	12.3	---	---	26.0	23.5	26.4	21.8	26.5	24.5
11	10.2	8.0	13.7	12.9	---	---	26.7	24.3	26.0	21.9	25.7	23.9
12	10.0	8.2	14.1	11.5	---	---	25.9	24.2	26.3	22.2	23.6	22.5
13	11.1	8.2	14.5	12.3	---	---	26.2	24.0	27.5	22.6	24.8	22.2
14	10.8	9.2	14.9	12.7	---	---	---	---	27.6	23.3	24.9	23.2
15	10.8	9.8	15.7	14.1	---	---	---	---	26.9	24.3	23.4	21.4
16	13.3	10.2	16.3	14.3	18.8	18.4	---	---	28.1	24.0	21.5	19.9
17	14.9	11.0	17.4	14.7	18.4	17.9	---	---	27.2	24.1	22.2	20.8
18	16.4	12.7	19.6	16.4	18.4	18.0	---	---	25.8	23.9	21.4	20.3
19	15.9	14.3	19.2	18.4	18.7	18.1	---	---	26.5	23.2	21.3	19.5
20	17.0	13.5	20.6	18.2	---	---	---	---	27.1	23.3	20.3	19.1
21	18.0	14.3	21.0	19.6	---	---	---	---	28.3	24.7	21.7	18.7
22	18.0	14.9	20.6	16.8	---	---	---	---	29.2	25.5	21.8	19.8
23	17.0	16.1	20.6	18.2	---	---	---	---	28.3	25.8	19.9	18.1
24	17.8	15.9	19.4	16.1	---	---	---	---	26.7	25.4	18.0	17.1
25	20.2	16.6	20.2	18.0	---	---	---	---	26.4	24.4	17.1	16.4
26	21.5	17.8	21.2	18.6	25.0	23.3	---	---	25.1	24.0	17.2	16.2
27	23.1	19.4	22.1	19.6	25.5	22.6	---	---	24.7	23.5	17.3	15.9
28	22.1	20.0	22.3	19.4	---	---	---	---	25.0	23.1	17.1	16.1
29	22.1	20.4	23.7	20.1	---	---	---	---	25.8	23.7	16.6	16.2
30	22.7	20.4	22.1	20.9	25.1	20.4	---	---	25.7	24.6	17.0	16.4
31	---	---	---	---	---	---	---	---	24.5	22.3	---	---
MONTH	23.1	8.0	---	---	---	---	---	---	---	---	27.7	15.9

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	10.7	10.6	---	---	11.6	10.9	12.3	11.9
2	---	---	---	---	11.0	10.7	---	---	11.4	10.7	12.5	12.1
3	---	---	---	---	11.1	10.7	---	---	11.1	10.6	12.2	11.7
4	---	---	---	---	11.1	10.6	---	---	11.0	10.4	11.8	11.3
5	---	---	---	---	10.8	10.2	---	---	---	---	---	---
6	---	---	---	---	10.8	10.1	---	---	---	---	---	---
7	---	---	---	---	10.3	9.9	---	---	---	---	---	---
8	---	---	---	---	12.4	9.7	---	---	---	---	---	---
9	---	---	---	---	12.6	12.1	---	---	---	---	---	---
10	---	---	---	---	13.0	12.2	---	---	---	---	---	---
11	---	---	10.5	9.6	13.0	12.4	---	---	---	---	---	---
12	---	---	10.4	9.9	13.2	12.6	---	---	---	---	---	---
13	---	---	10.5	10.0	12.8	12.2	---	---	---	---	---	---
14	---	---	11.2	10.0	12.8	12.1	---	---	---	---	---	---
15	---	---	11.5	10.1	12.9	12.0	---	---	---	---	---	---
16	---	---	10.5	9.6	13.1	12.2	---	---	---	---	10.8	10.4
17	---	---	11.5	9.7	13.2	12.4	---	---	---	---	10.8	10.0
18	---	---	11.5	10.3	13.6	12.7	---	---	---	---	10.2	9.7
19	---	---	10.4	10.0	13.6	12.7	---	---	---	---	10.5	9.8
20	---	---	---	---	13.2	12.1	---	---	---	---	10.6	9.8
21	---	---	---	---	12.2	11.6	---	---	---	---	10.5	9.0
22	---	---	---	---	11.8	11.0	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	12.1	11.8	---	---	---	---
27	---	---	---	---	---	---	12.0	11.7	---	---	---	---
28	---	---	---	---	---	---	12.0	11.5	---	---	---	---
29	---	---	---	---	---	---	11.8	11.5	---	---	---	---
30	---	---	---	---	---	---	11.5	11.1	---	---	9.9	9.3
31	---	---	---	---	---	---	11.7	11.1	---	---	9.9	9.2
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.6	9.7	8.5	8.1	9.0	7.8	7.5	7.3	---	---	7.9	6.9
2	10.6	10.0	8.8	8.5	9.0	7.6	7.7	7.5	---	---	7.2	7.0
3	10.6	9.8	9.2	6.8	9.3	7.9	7.8	7.6	7.8	7.5	7.4	7.1
4	10.1	9.9	9.7	9.1	9.3	8.0	7.9	7.7	7.7	7.3	7.4	7.2
5	10.1	9.9	9.9	9.7	---	---	8.0	7.8	8.0	7.3	7.5	7.2
6	10.3	9.9	9.8	9.2	---	---	8.0	7.9	8.1	7.2	7.4	7.2
7	10.6	10.3	9.5	9.3	---	---	8.0	7.8	8.2	7.4	7.6	7.1
8	10.8	10.6	9.8	9.5	---	---	8.0	7.8	8.9	7.7	7.7	7.0
9	11.1	10.7	9.8	9.6	---	---	7.9	7.8	9.2	7.8	7.8	6.9
10	11.4	11.1	10.1	9.7	---	---	7.9	7.0	9.5	7.8	8.1	6.9
11	11.5	11.1	9.9	9.6	---	---	7.7	7.5	9.9	7.7	8.1	6.9
12	11.5	11.2	10.0	9.6	---	---	7.8	7.5	10.0	7.8	7.4	7.2
13	11.5	10.9	10.0	9.6	---	---	8.1	7.8	9.7	7.7	7.5	7.2
14	11.2	10.7	9.9	9.4	---	---	---	---	9.5	7.5	7.6	7.2
15	11.1	10.7	9.6	9.3	---	---	---	---	8.9	7.4	7.7	7.3
16	11.1	10.4	9.3	9.1	8.0	7.3	---	---	8.9	7.4	8.0	7.6
17	11.1	10.0	9.5	8.9	7.3	7.1	---	---	8.9	7.5	7.7	7.2
18	10.8	9.7	9.9	9.1	7.4	7.1	---	---	8.9	7.5	7.9	7.2
19	10.8	9.7	9.4	9.1	7.4	7.2	---	---	8.9	7.8	8.2	7.9
20	11.0	9.7	9.3	8.9	---	---	---	---	8.9	7.5	8.4	8.2
21	11.0	9.6	9.3	8.9	---	---	---	---	8.8	7.3	8.4	7.5
22	11.1	9.5	9.8	8.8	---	---	---	---	8.2	7.0	8.8	7.3
23	10.9	9.3	9.4	8.8	---	---	---	---	7.8	6.6	8.3	8.1
24	10.6	9.4	10.0	8.5	---	---	---	---	7.6	6.6	8.5	8.2
25	10.8	9.1	8.7	8.6	---	---	---	---	7.0	6.7	9.0	8.5
26	10.6	8.8	8.6	8.5	7.8	7.4	---	---	7.9	6.8	9.1	9.0
27	10.0	8.5	8.6	8.4	7.7	7.3	---	---	7.2	6.9	9.1	8.7
28	9.9	8.2	8.7	8.3	---	---	---	---	7.1	6.8	9.5	8.1
29	9.5	8.1	8.6	8.1	---	---	---	---	7.1	6.8	9.4	9.3
30	9.5	8.2	8.8	8.1	8.5	7.3	---	---	7.7	6.9	9.3	9.1
31	---	---	8.8	7.9	---	---	---	---	8.1	7.7	---	---
MONTH	11.5	8.1	10.1	7.9	---	---	---	---	---	---	9.5	6.9

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	432	51	60	267	1	.70	2960	55	448
2	355	39	38	256	0	.28	2330	23	147
3	293	29	23	239	1	.75	1920	12	60
4	271	16	12	233	1	.62	1630	9	38
5	260	14	10	576	24	64	1400	7	28
6	242	11	7.3	3110	512	4800	1230	7	23
7	216	10	6.1	3960	418	4610	1120	7	20
8	196	10	5.3	2790	98	752	1030	7	19
9	186	8	3.9	1890	53	274	949	8	19
10	177	10	4.7	1470	29	115	893	3	7.4
11	166	7	3.2	1690	29	134	871	4	9.6
12	156	6	2.5	1920	36	184	830	3	6.6
13	150	4	1.8	1710	29	132	751	3	5.6
14	145	4	1.7	1380	20	75	689	3	5.0
15	143	4	1.4	1170	13	42	664	3	4.8
16	139	3	1.0	1040	10	27	641	2	3.3
17	137	4	1.4	1110	10	31	646	2	3.3
18	137	5	1.9	1450	18	72	601	2	3.1
19	135	4	1.4	2000	36	198	553	2	2.7
20	131	4	1.3	7050	418	10700	523	3	4.3
21	142	4	1.7	12000	977	31600	601	3	5.2
22	166	4	2.0	8940	435	10700	2450	37	293
23	182	4	1.9	4940	262	3530	6140	136	2680
24	270	5	3.4	3070	157	1310	10400	404	13700
25	298	4	3.5	2250	68	417	15700	1020	43300
26	275	3	2.4	1830	30	150	14200	639	24600
27	242	3	1.7	1760	26	125	9440	341	8890
28	248	3	2.2	2610	46	341	5450	221	3250
29	271	5	3.5	3910	104	1110	4800	175	2250
30	270	4	2.6	3840	87	897	4290	174	2030
31	267	2	1.7	---	---	---	3740	20	204
TOTAL	6698	---	214.5	80461	---	72392.35	99442	---	102059.9
		JANUARY			FEBRUARY			MARCH	
1	3520	11	110	1650	7	33	4210	23	266
2	3940	16	173	1620	8	37	3740	22	221
3	3690	11	106	1730	12	60	3490	52	486
4	3310	8	71	3050	42	344	3270	28	244
5	2820	7	55	4310	58	694	5840	331	8370
6	3650	39	453	4930	48	638	27000	2880	217000
7	6900	330	6330	4630	22	278	26700	1310	94100
8	9230	428	11300	4360	16	193	21700	280	16600
9	10800	444	13000	3900	13	133	16300	155	6910
10	8840	147	3520	3260	9	82	8640	88	2090
11	6440	121	2100	2860	7	55	5410	46	673
12	12700	626	29800	2670	6	44	4350	30	348
13	24700	1100	73600	2410	6	38	3710	22	216
14	23200	443	28100	6390	300	8970	3270	16	142
15	23700	403	25800	12500	1280	43700	3030	12	101
16	21600	156	9130	11900	375	12200	2670	12	83
17	17000	101	4650	9850	175	4660	2370	11	73
18	11100	73	2200	9700	314	8260	2130	9	54
19	6640	60	1060	9640	203	5300	2080	10	55
20	5020	37	505	9100	110	2800	2340	19	120
21	4080	19	215	23400	876	59400	4450	71	1100
22	3330	9	81	24200	668	43900	8500	351	8660
23	2800	12	92	20600	298	16700	9020	214	5360
24	2530	15	103	16900	192	8820	7040	52	988
25	2310	13	79	10100	93	2640	5670	36	552
26	2150	11	64	6130	45	747	4720	29	372
27	2010	9	49	5100	29	400	4050	23	248
28	1910	10	50	4610	26	324	3560	15	149
29	1760	11	50	---	---	---	3170	6	56
30	1640	10	42	---	---	---	2830	2	13
31	1620	6	26	---	---	---	2820	4	29
TOTAL	234940	---	212914	221500	---	221450	208080	---	365687

03404500 CUMBERLAND RIVER AT CUMBERLAND FALLS, KY--Continued

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	3270	8	73	3920	72	795	1460	27	106
2	3490	23	221	5040	76	1040	1280	15	50
3	3590	25	242	5280	70	995	1160	19	59
4	6380	220	4670	5090	84	1140	1160	16	49
5	10500	202	6030	4230	69	801	1150	15	46
6	10800	152	4390	12900	444	18600	1420	26	111
7	8060	65	1440	17600	593	27900	4940	174	2670
8	6200	41	699	15800	148	6380	7540	644	12900
9	5690	16	241	11500	72	2210	6880	320	6010
10	5430	17	244	7330	57	1130	11400	395	12600
11	4750	17	221	5870	48	760	10300	279	7670
12	4110	12	131	4960	47	634	6180	159	2680
13	3580	3	31	4240	38	440	6080	262	4410
14	3160	2	20	3610	30	288	8010	200	4350
15	3030	2	15	3920	96	1120	11300	958	35400
16	3130	1	13	4340	76	888	31200	3500	301000
17	2900	0	3.5	3750	56	564	31600	2800	239000
18	2610	1	3.5	2970	40	320	28200	1250	99600
19	2440	8	50	2560	30	210	24200	734	48000
20	2270	15	94	2630	37	267	20700	503	28200
21	2090	10	59	3800	56	583	14700	328	13100
22	1920	8	40	4400	94	1120	6440	212	3710
23	1790	8	37	4050	93	1020	4530	161	2000
24	1690	9	40	4720	125	1600	6210	467	7890
25	1640	6	25	4230	120	1380	4440	364	4360
26	1540	5	22	3220	77	674	3300	283	2520
27	1450	6	23	2800	50	377	2650	236	1680
28	1360	5	18	2940	61	483	2980	194	1570
29	1670	13	62	2400	48	314	3390	152	1390
30	2120	15	86	1940	39	203	2830	122	920
31	---	---	---	1650	32	141	---	---	---
TOTAL	112660	---	19244.0	163690	---	74377	268630	---	844051
		JULY			AUGUST			SEPTEMBER	
1	2510	153	1030	2560	144	1510	5450	688	10300
2	2260	177	1090	9250	933	24000	3040	426	3490
3	2780	185	1390	4230	228	2850	2580	285	2000
4	2740	212	1570	2230	83	514	1950	160	847
5	4070	332	3660	1530	40	166	1430	100	391
6	4000	263	2870	1250	33	113	1140	63	194
7	4160	165	1850	1410	46	176	955	58	150
8	5830	191	3030	1240	27	91	843	49	112
9	5260	223	3160	1020	21	58	770	40	83
10	3660	206	2020	871	15	36	703	41	78
11	2630	168	1200	728	19	36	951	55	216
12	2740	149	1110	625	11	18	3220	220	1960
13	2190	158	925	549	14	21	1760	112	529
14	1860	141	711	490	3	3.7	1160	78	245
15	1790	147	706	452	2	1.9	1800	165	794
16	1430	133	511	508	2	2.2	6220	270	4590
17	1220	96	315	590	1	2.1	7110	444	8890
18	1080	66	194	682	1	2.5	6020	618	10200
19	990	47	127	691	1	1.3	3440	262	2460
20	933	44	110	636	3	5.9	2410	131	850
21	886	20	48	558	1	.79	1910	107	554
22	829	28	63	551	3	4.1	4530	216	4990
23	809	26	56	544	3	5.0	20300	360	20100
24	772	22	46	720	5	11	16900	282	12900
25	761	18	38	2600	201	1780	9480	209	5350
26	711	17	33	3720	198	2120	6630	120	2150
27	615	13	22	3610	215	2100	6420	105	1830
28	537	7	10	2990	171	1360	4980	114	1540
29	504	4	5.4	2010	192	1060	3830	103	1070
30	745	14	32	1630	99	434	4380	105	1240
31	1430	48	188	4130	292	4360	---	---	---
TOTAL	62732	---	28120.4	54605	---	42843.49	132312	---	100103
YEAR	1645750		2083456.64						

03404820 LAUREL RIVER AT MUNICIPAL DAM NEAR CORBIN, KY

LOCATION.--Lat 36°58'13", long 84°07'11", Laurel County, Hydrologic Unit 05130101, on left bank adjacent to State Highway 709, 200 ft upstream from Corbin Municipal Dam, 0.1 mi upstream from Lynn Camp Creek, 2.0 mi northwest of Corbin, and at mile 21.4.

DRAINAGE AREA.--140 mi^2.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder and concrete dam control. Datum of gage is 1,000.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records good. Diversion from gage pool at station for municipal supply of Corbin. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--16 years, 230 ft^3/s, 22.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft^3/s, May 7, 1984, gage height, 27.46 ft; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 21	0800	4,390	23.44	Mar. 6	1600	*7,290	*24.60

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	178	287	131	202	290	133	50	509	133	38
2	12	18	131	253	111	172	212	155	44	371	107	42
3	12	22	105	205	204	160	311	109	54	235	58	54
4	10	26	89	176	659	148	970	88	58	239	39	34
5	8.3	165	76	142	484	1880	1050	155	155	262	36	26
6	7.0	249	67	421	384	6690	610	547	555	1410	248	21
7	5.5	152	63	584	293	3770	406	552	336	1500	385	16
8	4.0	92	60	646	230	1080	344	343	211	927	128	14
9	4.1	63	58	666	181	511	319	267	546	573	71	13
10	2.8	90	59	468	138	375	235	342	503	333	52	12
11	.64	184	57	363	145	304	195	251	265	208	41	14
12	.19	129	53	1420	135	255	170	202	395	151	36	15
13	.00	82	49	2240	140	221	154	162	1450	119	32	15
14	.00	63	49	1460	661	232	144	133	1180	95	28	18
15	.00	52	49	1290	1170	194	191	141	1200	72	23	92
16	.00	52	47	972	1080	153	208	170	1730	58	21	591
17	.00	128	46	561	910	130	154	106	1300	49	28	330
18	.00	147	42	393	666	130	135	79	567	41	27	141
19	.00	120	40	303	575	138	121	67	318	37	55	80
20	.00	1090	40	240	753	147	108	288	238	230	52	58
21	.00	1130	117	196	3970	828	94	353	196	183	33	47
22	.00	532	588	164	3170	1050	84	225	151	76	23	271
23	.12	252	815	148	1150	573	79	886	563	52	21	1120
24	9.5	175	1320	138	529	477	79	677	716	48	66	881
25	26	126	1570	124	389	371	78	322	341	48	61	359
26	16	104	1010	115	339	297	71	199	187	37	51	348
27	13	209	432	124	289	248	63	219	146	32	68	265
28	17	419	407	111	252	209	61	194	1000	26	39	164
29	32	353	599	98	---	185	72	116	927	27	29	128
30	29	241	425	116	---	187	107	83	442	27	54	182
31	22	---	325	162	---	300	---	63	---	95	42	---
TOTAL	244.15	6482	8966	14586	19138	21617	7115	7627	15824	8070	2087	5399
MEAN	7.88	216	289	471	683	697	237	246	527	260	67.3	180
MAX	32	1130	1570	2240	3970	6690	1050	886	1730	1500	385	1120
MIN	.00	17	40	98	111	130	61	63	44	26	21	12
CFSM	.06	1.54	2.07	3.36	4.88	4.98	1.69	1.76	3.77	1.86	.48	1.29
IN.	.06	1.72	2.38	3.88	5.09	5.74	1.89	2.03	4.20	2.14	.55	1.43

CAL YR 1988 TOTAL 40592.00 MEAN 111 MAX 2290 MIN .00 CFSM .79 IN. 10.79
WTR YR 1989 TOTAL 117155.15 MEAN 321 MAX 6690 MIN .00 CFSM 2.29 IN. 31.13

03404900 LYNN CAMP CREEK AT CORBIN, KY

LOCATION.--Lat 36°57'05", long 84°05'37", Whitley County, Hydrologic Unit 05130101, on left bank 40 ft downstream from bridge on State Highway 312, (East Masters Street) at Corbin, 0.8 mi downstream from East Fork Lynn Camp Creek, and at mile 3.9.

DRAINAGE AREA.--53.8 mi^2.

PERIOD OF RECORD.--Annual maximums, water years 1957-73, October 1973 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,049.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 1, 1958 to Feb. 3, 1964, crest-stage gage at site 1,500 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--16 years, 84.3 ft^3/s, 21.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 9,000 ft^3/s, Jan. 29, 1957, gage height, 22.5 ft, before construction of cutoff; minimum daily, 0.02 ft^3/s, June 24, 25, 27-29, July 2, gage height, 2.55 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge base of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 21	1300	1,800	7.89	June 16	0600	1,680	7.67
Mar. 6	1200	*2,240	*8.67				

Minimum daily discharge, 1.3 ft^3/s, Oct. 2, 14-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	5.4	54	81	39	74	81	187	20	63	39	26
2	1.3	4.9	43	66	36	66	69	112	23	51	24	34
3	1.6	4.0	37	60	136	63	119	65	26	51	12	18
4	1.8	6.4	35	50	192	58	494	53	23	312	9.3	13
5	1.8	231	29	42	132	652	308	168	36	267	8.2	10
6	1.8	143	26	237	116	2030	167	405	83	468	124	8.2
7	1.8	66	24	189	89	616	131	243	92	683	44	7.1
8	1.8	42	22	346	73	240	128	134	53	261	20	6.4
9	1.8	30	21	219	59	165	106	128	165	126	13	5.4
10	1.8	91	20	145	53	128	79	119	88	77	8.9	5.1
11	1.6	88	20	123	52	105	69	78	52	57	7.6	8.8
12	1.6	44	18	844	50	89	64	64	114	48	6.9	16
13	1.4	34	16	1000	57	79	57	54	455	42	5.6	9.3
14	1.3	26	16	356	383	74	53	46	223	37	4.6	24
15	1.3	21	16	728	468	64	88	74	816	30	4.6	240
16	1.3	37	15	312	345	55	70	58	1310	27	9.9	308
17	2.7	107	15	186	280	50	57	42	340	24	13	72
18	2.2	54	15	137	243	49	47	36	156	20	43	38
19	1.8	69	14	106	213	48	45	32	102	17	9.5	24
20	1.8	689	12	85	355	59	44	160	81	17	6.1	16
21	7.2	298	157	71	1580	509	39	86	66	17	5.4	15
22	11	98	209	63	603	255	35	57	54	15	4.7	374
23	9.2	65	518	57	248	161	34	131	155	13	3.9	814
24	14	52	586	52	165	151	34	69	89	20	10	279
25	7.7	42	507	48	130	115	31	50	50	13	7.7	110
26	6.8	36	164	44	118	96	25	42	38	9.9	35	147
27	4.6	119	109	44	99	80	22	95	47	10	16	82
28	13	184	183	41	92	72	61	48	192	11	9.3	58
29	9.7	100	170	39	---	65	101	35	127	10	7.2	51
30	8.0	70	115	44	---	68	63	28	60	15	171	134
31	6.7	---	93	45	---	111	---	23	---	15	44	---
TOTAL	131.8	2856.7	3279	5860	6406	6447	2721	2922	5136	2826.9	727.4	2953.3
MEAN	4.25	95.2	106	189	229	208	90.7	94.3	171	91.2	23.5	98.4
MAX	14	689	586	1000	1580	2030	494	405	1310	683	171	814
MIN	1.3	4.0	12	39	36	48	22	23	20	9.9	3.9	5.1
CFSM	.08	1.77	1.97	3.51	4.25	3.87	1.69	1.75	3.18	1.69	.44	1.83
IN.	.09	1.98	2.27	4.05	4.43	4.46	1.88	2.02	3.55	1.95	.50	2.04

CAL YR 1988 TOTAL 16458.27 MEAN 45.0 MAX 1040 MIN .02 CFSM .84 IN. 11.38
WTR YR 1989 TOTAL 42267.1 MEAN 116 MAX 2030 MIN 1.3 CFSM 2.15 IN. 29.23

03406500 ROCKCASTLE RIVER AT BILLOWS, KY

LOCATION.--Lat 37°10'16", long 84°17'46", Laurel County, Hydrologic Unit 05130102, on left bank 200 ft upstream from bridge on State Highway 80 at Billows, 0.9 mi upstream from Pine Creek, 1.1 mi downstream from Hawk Creek, 13 mi west of London, and at mile 24.4.

DRAINAGE AREA.--604 mi^2.

PERIOD OF RECORD.--July 1936 to current year.

REVISED RECORDS.--WSP 1436: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.90 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 19, 1940, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--53 years, 923 ft^3/s, 20.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s, Dec. 9, 1978, gage height, 47.17 ft; minimum, 0.8 ft^3/s, Sept. 9, 1957, gage height, 0.56 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1913 reached a stage of about 40 ft from information by U.S. Army Corps of Enginers.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 21	0130	18,600	26.62	Feb. 21	2400	*25,400	*31.78
Dec. 25	0700	18,700	26.63	Mar. 6	1700	24,500	31.14
Feb. 15	2300	20,300	27.91	May 23	1800	13,700	22.29

Minimum daily discharge, 17 ft^3/s, Oct. 15-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	57	812	1310	646	923	1570	340	367	491	82	219
2	75	56	657	1130	598	785	1320	386	302	432	96	175
3	63	50	542	932	1300	711	1550	387	304	340	139	163
4	54	48	469	813	6030	654	3830	341	329	288	124	149
5	45	91	412	673	2900	4950	4930	433	289	333	87	106
6	38	484	358	1100	1990	22700	2810	1110	619	747	160	85
7	33	565	323	2180	1490	14600	2000	1320	642	866	431	72
8	30	462	296	2750	1180	3740	1610	1110	434	641	310	63
9	27	347	270	3120	939	2380	1430	986	772	540	188	56
10	25	292	248	2110	768	1780	1120	2220	1350	610	130	52
11	23	620	231	1610	716	1440	938	1780	793	353	97	51
12	21	588	207	3690	653	1200	823	1330	583	257	78	51
13	20	423	188	8570	637	1040	734	1030	2480	216	65	50
14	19	341	180	4100	5540	1180	655	840	2580	182	57	82
15	17	286	178	4170	17400	1040	657	727	3110	152	50	1040
16	17	250	170	3320	16300	877	768	666	6970	126	46	3880
17	17	372	157	2300	6820	771	647	565	3640	103	42	3200
18	17	587	141	1750	3540	727	582	481	2020	87	239	1240
19	17	506	134	1380	2570	689	550	420	1360	83	425	727
20	17	11100	129	1100	2230	658	513	491	1080	295	216	513
21	20	12200	243	894	18000	5260	475	824	984	628	140	382
22	25	2420	2410	741	17900	5460	444	606	825	315	104	394
23	27	1420	2140	651	4290	2720	413	9540	1220	219	88	2740
24	42	978	7820	585	2540	2180	401	5960	1920	172	509	3300
25	63	731	15500	529	1890	1770	389	2320	1170	140	844	1610
26	84	578	3900	486	1590	1460	369	1520	753	118	598	1280
27	76	747	2120	476	1350	1230	340	2230	522	92	417	1100
28	67	1420	1790	450	1120	1040	377	1330	655	83	285	759
29	65	1240	2710	402	---	912	327	910	1190	85	210	618
30	64	998	2010	440	---	884	315	648	730	75	161	624
31	61	---	1590	716	---	1150	---	471	---	71	173	---
TOTAL	1260	40257	48335	54478	122927	86911	32887	43322	39993	9140	6591	24781
MEAN	40.6	1342	1559	1757	4390	2804	1096	1397	1333	295	213	826
MAX	91	12200	15500	8570	18000	22700	4930	9540	6970	866	844	3880
MIN	17	48	129	402	598	654	315	340	289	71	42	50
CFSM	.07	2.22	2.58	2.91	7.27	4.64	1.81	2.31	2.21	.49	.35	1.37
IN.	.08	2.48	2.98	3.36	7.57	5.35	2.03	2.67	2.46	.56	.41	1.53

CAL YR 1988 TOTAL 206755.9 MEAN 565 MAX 15500 MIN 6.4 CFSM .94 IN. 12.73
WTR YR 1989 TOTAL 510882 MEAN 1400 MAX 22700 MIN 17 CFSM 2.32 IN. 31.46

03407500 BUCK CREEK NEAR SHOPVILLE, KY

LOCATION.--Lat 37°12'38", long 84°27'52", Pulaski County, Hydrologic Unit 05130103, on right bank on downstream side of bridge on State Highway 461, 0.2 mi downstream from Brush Creek, 3.7 mi north of Shopville, 11.5 mi northeast of Somerset, and at mile 31.8.

DRAINAGE AREA.--165 mi^2.

PERIOD OF RECORD.--October 1952 to current year. Monthly discharge only, October to December 1952, published in WSP 1726.

REVISED RECORDS.--WSP 1436: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 831.594 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1953, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Estimated daily discharge: Oct. 1-4 and Apr. 4-6. Records good. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--37 years, 273 ft^3/s, 22.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft^3/s, Feb. 27, 1962, gage height, 23.21 ft, from rating curve extended above 7,200 ft^3/s, on basis of contracted-opening measurement at gage height, 19.55 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	1330	10,900	15.87	Feb. 21	0730	*14,600	*19.00
Dec. 24	1730	9,630	14.68	Mar. 6	0530	8,370	13.47
Feb. 15	1030	9,650	14.70	June 15	1630	5,280	10.31

Minimum daily discharge, 3.3 ft^3/s, Aug. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	38	245	373	248	253	435	68	49	68	23	19
2	35	33	196	307	204	216	322	88	43	61	31	16
3	32	29	151	256	1660	196	469	76	40	62	24	15
4	29	28	143	210	2400	178	2100	64	39	182	17	16
5	25	139	122	174	907	4280	1200	226	93	602	12	13
6	21	308	112	712	573	5180	670	341	671	259	134	9.5
7	18	232	104	650	409	1350	498	227	250	196	125	7.5
8	16	165	95	1060	327	902	439	150	129	122	55	5.8
9	15	123	85	676	242	555	396	161	419	86	32	4.4
10	14	251	81	474	200	427	308	412	412	68	20	3.5
11	12	492	75	404	184	373	249	245	323	55	14	3.9
12	11	263	65	2360	165	316	211	170	155	45	11	4.2
13	9.6	199	63	1810	294	299	182	130	736	40	8.3	3.5
14	8.4	182	64	884	4840	343	160	108	748	36	6.4	5.6
15	7.7	140	61	1110	7320	274	249	93	3120	31	5.1	40
16	8.1	139	55	693	3170	210	244	83	3960	25	4.0	231
17	8.2	294	51	500	1350	179	178	70	1630	20	3.3	155
18	8.2	203	47	417	995	168	149	62	507	17	54	81
19	8.6	544	46	350	826	155	131	56	408	16	27	52
20	8.9	7710	47	284	1080	187	116	181	346	93	16	39
21	9.6	7110	633	221	9560	1700	105	134	317	86	10	31
22	18	2270	955	184	1730	1470	96	92	209	61	8.4	36
23	24	535	989	166	984	839	90	1310	204	37	18	923
24	36	379	5100	151	731	473	88	382	226	27	205	570
25	40	274	5370	138	565	380	86	217	140	20	166	278
26	32	219	954	133	461	318	78	150	103	15	228	215
27	26	672	528	167	380	263	71	138	84	12	87	142
28	31	511	723	136	320	221	78	113	81	10	56	96
29	55	388	689	124	---	213	66	85	181	9.4	40	81
30	50	317	483	288	---	271	62	69	88	10	31	117
31	43	---	401	327	---	437	---	58	---	11	24	---
TOTAL	698.3	24187	18743	15739	42125	22626	9526	5759	15711	2382.4	1495.5	3213.9
MEAN	22.5	806	605	508	1504	730	318	186	524	76.9	48.2	107
MAX	55	7710	5370	2360	9560	5180	2100	1310	3960	602	228	923
MIN	7.7	28	46	124	165	155	62	56	39	9.4	3.3	3.5
CFSM	.14	4.89	3.66	3.08	9.12	4.42	1.92	1.13	3.17	.47	.29	.65
IN.	.16	5.45	4.23	3.55	9.50	5.10	2.15	1.30	3.54	.54	.34	.72

CAL YR 1988 TOTAL 75529.20 MEAN 206 MAX 7710 MIN .00 CFSM 1.25 IN. 17.03
WTR YR 1989 TOTAL 162206.1 MEAN 444 MAX 9560 MIN 3.3 CFSM 2.69 IN. 36.57

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY

LOCATION.--Lat 36°37'37", long 84°32'00", McCreary County, Hydrologic Unit 05130104, on left right bank 1,000 ft below confluence of Bear Creek, 400 ft upstream from Salt Branch, 5.5 mi southwest of Stearns, and at mile 49.6. Records include flow of Bear Creek.

DRAINAGE AREA.--954 mi^2, includes that of Bear Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1942 to current year.

REVISED RECORDS.--WSP 1113: 1946(M). WSP 1436: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 763.83 ft above National Geodetic Vertical Datum of 1929; prior to Oct. 1, 1980 at site 1,000 ft upstream at datum 0.98 ft higher.

REMARKS.--No estimated daily discharges. Water-discharge records good.

AVERAGE DISCHARGE.--47 years, 1,762 ft^3/s, 25.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 93,200 ft^3/s, May 28, 1973, gage height, 46.29 ft present datum, from floodmarks; minimum discharge, 11 ft^3/s, Oct. 4, 1948, Sept. 17, 18, 19, 20, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1929, reached a stage of 52.9 ft from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 22,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	2400	24,100	21.98	Mar. 6	1700	*46,200	*31.13
Jan. 13	0400	39,400	28.58	June 16	1300	45,300	30.80
Feb. 21	2000	33,800	26.33				

Minimum discharge, 74 ft^3/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	223	1930	5270	845	2240	2250	900	457	1140	1300	488
2	213	190	1490	5410	773	2380	1980	1530	388	1010	4980	902
3	191	168	1180	3610	841	2320	1890	1310	370	970	2390	1010
4	178	159	986	2720	1300	2200	4210	1000	402	1040	1280	654
5	179	581	854	2060	1450	5630	9470	1060	576	1750	813	469
6	171	4640	744	2730	1800	37600	5460	6640	3620	1660	621	368
7	146	2890	681	4710	2510	15400	3670	5740	9450	5920	536	320
8	130	1660	633	5470	2350	5960	3090	3440	3810	4730	495	296
9	118	1090	591	7510	1930	3950	3610	2530	5260	2690	389	251
10	112	866	556	4420	1570	2960	3070	2520	7170	1720	318	215
11	103	1190	522	3240	1460	2400	2470	2150	3450	1210	272	591
12	92	1180	475	18800	1340	2010	2040	1710	2160	2550	241	1960
13	87	926	451	30200	1210	1730	1720	1400	5310	5330	216	1000
14	82	774	440	10100	6250	1510	1480	1140	5350	3240	194	748
15	80	660	427	11600	11900	1310	1490	1010	7150	1980	185	1980
16	79	580	407	8620	5790	1110	1600	920	37500	1320	175	11100
17	82	977	388	5120	5420	952	1350	767	9440	1030	227	5050
18	85	1720	355	3630	8400	904	1180	647	4250	835	258	2450
19	79	1440	340	2790	6740	1010	1060	585	2750	662	366	1550
20	74	18200	335	2240	5780	1090	969	963	5370	626	306	1070
21	84	13100	572	1820	25100	4330	884	2510	10700	622	234	809
22	110	4530	2970	1520	16200	6090	806	1590	5870	846	199	945
23	116	2720	5700	1320	6610	3830	747	1290	4880	790	194	11500
24	118	1930	8870	1180	4280	3140	708	1140	5660	715	384	8900
25	144	1480	14700	1070	3160	2590	672	900	3490	655	1760	4040
26	130	1170	5890	975	2680	2180	625	711	2080	499	947	5200
27	123	1720	3510	931	2400	1850	570	763	1490	389	1040	5110
28	137	4390	2740	890	2220	1600	594	1320	1510	326	865	2930
29	181	3710	3310	808	---	1410	573	948	1990	291	637	2100
30	200	2600	2880	782	---	1310	566	686	1650	298	523	2640
31	246	---	2640	825	---	1580	---	556	---	927	521	---
TOTAL	4114	77464	67567	152371	132309	124576	60804	50376	154553	47771	22866	76646
MEAN	133	2582	2180	4915	4725	4019	2027	1625	5152	1541	738	2555
MAX	246	18200	14700	30200	25100	37600	9470	6640	37500	5920	4980	11500
MIN	74	159	335	782	773	904	566	556	370	291	175	215
CFSM	.14	2.71	2.28	5.15	4.95	4.21	2.12	1.70	5.40	1.62	.77	2.68
IN.	.16	3.02	2.63	5.94	5.16	4.86	2.37	1.96	6.03	1.86	.89	2.99

CAL YR 1988 TOTAL 416117 MEAN 1137 MAX 31800 MIN 18 CFSM 1.19 IN. 16.23
WTR YR 1989 TOTAL 971417 MEAN 2661 MAX 37600 MIN 74 CFSM 2.79 IN. 37.88

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-72, 1979 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: May 1980 to current year.
pH: May 1980 to current year.
WATER TEMPERATURE: May 1980 to current year.
DISSOLVED OXYGEN: May 1980 to current year.
TURBIDITY: May 1980 to September 1987.
SUSPENDED SEDIMENT DISCHARGE: May 1980 to current year.

INSTRUMENTATION.--Five parameter water-quality monitor and sediment pumping sampler since May 1980.

REMARKS.--Miscellaneous samples prior to 1979. Interruptions in daily record were due to malfunctions of the instruments. Miscellaneous measurement values may fall outside the range observed for that day by the water quality monitor due to minor differences in sampling location.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 434 microsiemens, July 17, 1985; minimum, 40 microsiemens, May 7, 1984.
pH: Maximum, 8.6 units, Aug. 10, 1989; minimum, 5.2 units, May 19, Nov. 24, 1980.
WATER TEMPERATURE: Maximum, 34.6°C, Aug. 31, Sept. 1, 1989; minimum, 0.0°C, Dec. 25-27, 1983.
DISSOLVED OXYGEN: Maximum, 14.3 mg/L, Dec. 21, 1981, Jan. 1, 2, 1984; minimum, 4.5 mg/L, May 22, 1980.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,980 mg/L, Aug. 9, 1981; minimum daily mean, 0 mg/L, on several days in 1983-84, 1987-88.
SEDIMENT LOADS: Maximum daily, 200,000 tons, Sept. 2, 1982; minimum daily, 0.04 ton, Nov. 25, 1987.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 318 microsiemens, Nov. 6; minimum, 47 microsiemens, Feb. 15.
pH: Maximum, 8.6 units, Aug. 10; minimum, 5.9 units, Jan. 24, April 4, 5, 8.
WATER TEMPERATURE: Maximum, 34.6°C, Aug. 31, Sept. 1; minimum, 1.5°C, Dec. 18, 19.
DISSOLVED OXYGEN: Maximum, 13.5 mg/L, Feb. 10-12; minimum, 6.6 mg/L, Aug. 6.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 798 mg/L, Jan. 12; minimum daily mean, 1 mg/L, Aug. 22.
SEDIMENT LOADS: Maximum daily, 78,200 tons, June 16; minimum daily, 0.62 ton, Aug. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 1988 12...	1310	91	135	6.90	15.0	0.60	9.3	94	K3	31	50
DEC 07...	1335	697	125	7.56	3.5	2.2	12.7	98	5	10	48
FEB 1989 22...	1325	14300	73	6.36	8.0	69	11.2	97	K400	--	28
APR 04...	1320	4060	108	5.97	13.0	18	10.0	98	100	K330	44
JUN 13...	1055	2760	92	5.91	19.0	0.30	8.1	90	--	--	36
AUG 09...	1225	389	145	7.30	22.5	5.0	8.1	96	25	20	56

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1988 12...	30	12	4.9	4.7	1.8	22	18	20	4.4	34	0.10
DEC 07...	32	11	5.0	3.6	1.2	18	15	16	2.9	35	0.10
FEB 1989 22...	19	6.4	2.9	1.3	1.1	12	10	9	1.2	24	0.10
APR 04...	31	9.9	4.7	2.9	1.1	18	14	13	2.2	34	<0.10
JUN 13...	22	8.4	3.6	2.1	1.0	15	12	13	1.5	25	0.10
AUG 09...	32	13	5.7	3.6	1.5	31	25	25	1.9	37	0.10

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)
OCT 1988 12...	3.7	85	78	<0.010	<0.100	0.030	<0.010	0.30	0.010	0.010
DEC 07...	5.4	80	75	<0.010	0.160	<0.010	<0.010	0.50	<0.010	<0.010
FEB 1989 22...	4.3	44	48	0.020	0.260	0.020	0.030	0.50	0.070	0.010
APR 04...	4.8	67	69	<0.010	0.160	0.080	0.040	0.60	<0.010	<0.010
JUN 13...	5.6	86	57	<0.010	0.130	0.010	0.020	1.4	0.020	0.030
AUG 09...	4.9	79	83	<0.010	0.100	0.010	0.030	<0.20	0.010	<0.010

DATE	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)
OCT 1988 12...	<0.010	20	<1	27	<0.5	<1	<1	<3	2	63
DEC 07...	<0.010	30	<1	24	<0.5	1	<1	<3	2	55
FEB 1989 22...	<0.010	--	--	--	--	--	--	--	--	--
APR 04...	<0.010	100	<1	24	<0.5	1	<1	<3	6	82
JUN 13...	<0.010	40	<1	23	<0.5	<1	<1	<3	1	59
AUG 09...	<0.010	--	--	--	--	--	--	--	--	--

DATE	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1988 12...	<5	<4	66	<10	<1	<1	<1.0	45	<6	17
DEC 07...	<5	<4	89	<10	3	<1	<1.0	38	<6	12
FEB 1989 22...	--	--	--	--	--	--	--	--	--	--
APR 04...	<5	<4	200	<10	6	<1	1.0	30	<6	24
JUN 13...	<1	<4	64	<10	1	<1	<1.0	28	<6	19
AUG 09...	--	--	--	--	--	--	--	--	--	--

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
12...	1310	91	135	15.0	2	0.49	25
DEC							
07...	1335	697	125	3.5	1	1.9	81
FEB							
22...	1325	14300	73	8.0	147	5680	80
APR							
04...	1320	4060	108	13.0	34	373	74
JUN							
13...	1055	2760	92	19.0	41	306	--
JUL							
27...	1123	397	146	25.0	4	4.3	58
AUG							
09...	1225	389	145	22.5	9	9.5	78

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	130	128	136	130	108	106	136	102	140	134	122	110
2	130	128	152	136	108	106	136	100	142	134	126	120
3	128	128	174	152	110	108	100	98	143	135	126	122
4	128	126	190	172	114	110	102	98	142	132	124	118
5	126	122	218	172	116	110	104	102	130	110	118	68
6	124	120	318	144	118	112	104	92	114	102	70	60
7	124	120	142	128	122	118	102	94	115	99	72	66
8	124	120	126	122	126	120	108	100	121	104	84	70
9	124	124	124	124	128	122	126	94	102	79	84	80
10	126	122	126	120	132	128	96	90	79	68	102	80
11	126	122	122	118	136	130	96	92	68	58	108	100
12	126	126	120	118	138	132	100	68	61	55	112	104
13	126	122	124	118	138	138	80	66	58	49	116	108
14	126	122	128	124	142	138	90	80	55	51	116	112
15	126	124	132	128	144	140	98	90	68	47	120	116
16	126	122	140	130	146	140	106	98	72	66	126	120
17	128	124	142	140	146	144	116	106	74	70	130	122
18	128	128	144	130	146	142	120	114	88	74	134	130
19	130	128	146	130	148	142	126	120	94	88	134	132
20	132	130	138	72	150	148	132	126	90	78	140	132
21	134	130	92	80	156	148	136	130	76	62	152	102
22	140	134	90	82	146	102	142	138	76	70	128	110
23	140	138	96	90	138	96	144	122	84	76	108	92
24	142	140	100	92	96	68	130	122	92	82	94	90
25	142	140	106	100	92	78	130	128	96	90	96	90
26	140	138	110	102	82	78	134	130	100	92	100	96
27	138	136	112	106	88	82	138	130	106	100	108	102
28	140	136	134	112	90	88	140	138	112	102	110	106
29	140	138	136	114	96	90	142	138	---	---	116	110
30	138	132	114	108	104	96	144	140	---	---	126	116
31	136	130	---	---	108	102	146	139	---	---	126	122
MONTH	142	120	318	72	156	68	146	66	143	47	152	60

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	132	120	152	140	134	130	140	132	212	172	145	137
2	136	130	160	140	138	132	146	136	246	130	143	123
3	140	134	178	140	142	138	146	138	130	120	145	96
4	132	96	182	176	144	140	138	120	134	130	93	86
5	110	92	176	158	154	144	162	124	136	130	99	93
6	98	88	154	122	162	128	198	166	136	130	107	98
7	92	88	118	90	120	82	192	104	138	132	110	100
8	96	92	92	90	92	84	100	88	142	136	113	110
9	112	96	94	92	92	86	102	94	148	140	113	108
10	124	112	94	92	130	88	108	102	150	146	112	108
11	124	108	104	94	100	96	112	108	154	150	112	76
12	108	102	116	104	98	94	118	90	158	150	149	92
13	110	106	124	116	134	90	128	80	164	158	130	90
14	110	108	120	116	128	92	102	80	166	160	93	86
15	112	110	118	112	130	96	108	100	168	162	98	75
16	116	112	120	116	130	68	108	106	170	166	78	58
17	118	116	122	120	102	82	110	108	174	170	82	68
18	118	116	126	122	108	100	114	108	180	172	82	71
19	124	118	126	122	112	104	118	112	188	178	82	74
20	126	122	128	122	124	110	124	120	194	188	90	78
21	128	122	130	120	130	88	132	122	206	192	94	87
22	130	126	136	128	90	88	136	130	218	206	102	92
23	132	128	130	122	90	78	152	136	222	214	128	86
24	134	130	130	120	92	70	170	152	215	194	96	80
25	136	130	122	118	84	72	160	142	206	155	86	82
26	138	132	124	120	100	86	146	140	214	157	104	86
27	140	138	122	116	106	100	144	140	216	149	104	98
28	142	140	130	116	110	106	142	138	150	136	98	94
29	146	140	144	130	110	102	152	140	159	152	96	92
30	146	140	142	136	142	108	170	150	160	151	96	82
31	---	---	136	130	---	---	172	162	151	138	---	---
MONTH	146	88	182	90	162	68	198	80	246	120	149	58
YEAR	318	47										

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

PH (STANDARD UNITS), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.0	6.8	6.9	6.8	7.2	7.2	6.8	6.7	7.1	7.0	6.8	6.7
2	7.0	6.8	6.9	6.8	7.3	7.2	6.7	6.6	7.1	7.1	6.8	6.8
3	6.9	6.8	7.0	6.9	7.4	7.3	6.6	6.6	7.1	6.9	6.8	6.8
4	7.0	6.8	7.2	6.9	7.5	7.3	6.6	6.6	7.0	6.9	6.8	6.7
5	7.0	6.9	7.0	6.7	7.5	7.5	6.7	6.5	7.1	7.0	6.7	6.3
6	7.0	6.8	7.2	7.0	7.6	7.5	6.6	6.4	7.1	7.0	6.5	6.3
7	7.1	6.8	7.0	6.9	7.6	7.4	6.5	6.5	7.2	7.1	6.5	6.4
8	7.0	6.8	6.9	6.8	7.6	7.6	6.6	6.4	7.2	7.2	6.6	6.2
9	7.0	6.8	6.9	6.8	7.6	7.5	6.5	6.3	7.2	7.1	6.6	6.5
10	7.0	6.8	6.9	6.8	7.6	7.5	6.4	6.3	7.1	7.1	6.7	6.1
11	7.0	6.8	6.9	6.8	7.6	7.5	6.4	6.3	7.1	7.0	6.8	6.3
12	7.1	6.8	6.9	6.8	7.6	7.5	6.3	6.1	7.1	7.0	6.9	6.6
13	7.1	6.8	6.9	6.9	7.6	7.5	6.3	6.1	7.1	7.0	6.8	6.5
14	7.0	6.8	7.0	6.8	7.5	7.4	6.2	6.1	7.0	6.8	6.9	6.7
15	7.0	6.8	6.9	6.8	7.5	7.4	6.1	6.1	6.8	6.3	7.0	6.9
16	7.0	6.8	6.9	6.8	7.5	7.5	6.2	6.1	6.4	6.3	6.9	6.8
17	7.0	6.8	6.9	6.8	7.5	7.4	6.3	6.2	6.4	6.4	6.9	6.8
18	6.9	6.8	7.0	6.9	7.4	7.4	6.3	6.2	6.4	6.4	6.8	6.8
19	6.9	6.7	6.9	6.7	7.4	7.4	6.4	6.3	6.4	6.4	6.8	6.7
20	6.9	6.7	6.7	6.2	7.4	7.4	6.5	6.4	6.4	6.2	6.7	6.6
21	6.8	6.7	6.4	6.3	7.4	6.9	6.5	6.4	6.3	6.1	6.6	6.2
22	6.8	6.7	6.4	6.3	7.2	7.1	6.5	6.4	6.2	6.0	6.6	6.4
23	6.8	6.7	6.5	6.4	7.1	6.9	6.5	6.0	6.3	6.0	6.4	6.3
24	6.8	6.7	6.6	6.5	7.0	6.7	6.5	5.9	6.5	6.3	6.3	6.3
25	6.7	6.7	6.7	6.6	6.9	6.7	6.8	6.4	6.6	6.5	6.3	6.2
26	6.8	6.7	6.9	6.7	6.7	6.7	6.9	6.8	6.7	6.6	6.3	6.2
27	6.9	6.6	7.0	6.8	6.7	6.7	6.9	6.8	6.7	6.7	6.3	6.3
28	6.9	6.8	7.2	7.0	6.7	6.7	7.0	6.9	6.7	6.7	6.3	6.2
29	6.9	6.7	7.2	7.1	6.7	6.6	7.0	7.0	---	---	6.3	6.2
30	6.8	6.8	7.2	7.0	6.7	6.7	7.0	7.0	---	---	6.3	6.3
31	6.8	6.8	---	---	6.8	6.7	7.1	7.0	---	---	6.3	6.1
MONTH	7.1	6.6	7.2	6.2	7.6	6.6	7.1	5.9	7.2	6.0	7.0	6.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.2	6.1	7.0	6.9	7.3	7.0	7.1	7.0	7.1	7.0	7.3	7.0
2	6.2	6.2	7.0	6.9	7.2	7.0	7.1	7.0	7.2	6.9	7.3	6.9
3	6.2	6.1	7.1	6.9	7.2	7.0	7.1	7.1	7.2	6.9	7.3	7.0
4	6.2	5.9	7.1	7.0	7.2	7.0	7.1	7.0	7.3	7.1	7.2	6.8
5	6.1	5.9	7.0	6.7	7.1	7.0	7.1	7.0	7.5	7.3	7.3	6.8
6	6.1	6.0	6.8	6.5	7.0	6.8	7.2	7.1	7.5	7.4	7.4	7.0
7	6.0	6.0	6.6	6.3	6.7	6.5	7.2	6.9	7.6	7.4	7.7	7.0
8	6.0	5.9	6.4	6.3	6.5	6.4	6.8	6.8	7.5	7.2	7.8	7.2
9	6.1	6.0	6.4	6.3	6.6	6.5	6.9	6.8	8.3	6.9	7.7	7.3
10	6.2	6.1	6.5	6.4	6.7	6.6	6.9	6.9	8.6	8.1	7.6	7.3
11	6.3	6.1	6.6	6.5	6.6	6.6	7.0	6.9	8.5	8.1	7.6	6.9
12	6.2	6.1	6.7	6.6	6.8	6.6	7.0	6.8	8.5	8.0	7.6	7.3
13	6.3	6.2	6.8	6.7	6.7	6.6	7.0	6.8	8.3	7.9	7.4	7.3
14	6.4	6.2	6.9	6.7	6.7	6.5	6.9	6.8	8.2	7.8	7.4	7.2
15	6.3	6.3	6.8	6.7	6.8	6.6	6.9	6.9	8.0	7.9	7.4	6.9
16	6.4	6.3	6.9	6.8	6.8	6.2	7.0	6.9	8.0	7.7	7.0	6.8
17	6.6	6.5	7.0	6.8	6.3	6.1	7.0	6.9	7.8	7.5	7.0	6.8
18	6.9	6.6	7.0	6.8	6.3	6.2	7.1	7.0	7.6	7.4	7.0	6.6
19	7.0	6.9	7.0	6.8	6.4	6.3	7.2	7.0	7.4	7.2	---	---
20	7.0	6.9	6.9	6.7	6.9	6.4	7.3	7.0	7.3	7.1	---	---
21	7.0	6.9	6.9	6.8	6.9	6.7	7.3	7.1	7.3	7.0	---	---
22	7.0	6.9	6.9	6.8	6.8	6.7	7.3	7.1	7.1	6.9	---	---
23	7.0	6.9	6.8	6.7	6.8	6.7	7.3	7.1	7.5	6.8	---	---
24	6.9	6.8	6.9	6.7	6.9	6.7	7.2	6.9	7.4	6.9	---	---
25	7.0	6.8	6.9	6.8	6.8	6.7	7.3	7.1	7.4	7.1	---	---
26	7.0	6.9	7.0	6.8	6.9	6.8	7.3	7.1	7.3	7.2	---	---
27	7.0	6.9	7.0	6.8	6.9	6.9	7.3	7.1	7.4	7.2	---	---
28	7.1	6.9	7.0	6.9	7.0	6.9	7.4	7.2	7.3	7.1	---	---
29	7.1	7.0	7.2	6.9	7.0	6.9	7.6	7.2	7.5	7.2	---	---
30	7.1	7.0	7.2	7.0	7.1	7.0	7.5	7.3	7.4	7.1	---	---
31	---	---	7.3	7.0	---	---	7.3	6.9	7.3	7.0	---	---
MONTH	7.1	5.9	7.3	6.3	7.3	6.1	7.6	6.8	8.6	6.8	---	---

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.6	20.6	11.4	10.6	7.0	6.1	7.3	5.8	7.8	6.8	5.5	4.6
2	21.4	20.9	10.9	10.0	6.3	5.5	8.0	7.4	8.2	7.7	5.8	5.0
3	21.1	20.2	10.9	9.8	5.4	5.0	7.8	7.4	8.3	7.9	6.6	5.3
4	20.4	19.2	11.4	10.7	5.1	4.7	7.4	6.6	7.9	7.4	7.6	6.5
5	19.6	18.0	11.3	10.5	4.7	4.1	6.6	6.0	7.4	6.9	9.1	7.8
6	18.4	17.1	10.8	10.1	4.2	3.7	6.3	5.9	6.9	5.6	10.0	9.1
7	17.9	16.6	10.2	9.9	4.3	3.5	7.3	6.1	5.6	4.6	---	---
8	17.3	15.9	10.1	9.7	4.3	4.0	8.5	7.3	4.6	3.9	---	---
9	16.8	15.5	10.0	9.5	4.2	3.8	8.9	7.8	3.8	2.8	---	---
10	16.7	15.7	10.9	10.1	3.8	3.3	7.8	6.6	2.8	2.0	---	---
11	16.9	15.4	10.4	9.6	3.6	3.0	6.8	6.5	2.7	2.0	---	---
12	16.1	14.5	10.1	9.6	3.1	2.5	9.2	6.9	2.7	2.1	---	---
13	15.3	13.5	10.1	9.7	2.8	2.5	---	---	---	---	---	---
14	14.9	12.8	9.7	9.2	3.1	2.4	---	---	---	---	10.4	9.1
15	15.2	13.0	9.9	9.1	3.3	2.9	---	---	---	---	11.2	10.4
16	14.4	13.2	10.6	9.9	2.9	2.4	---	---	9.2	8.8	11.6	10.5
17	15.5	13.9	10.4	9.6	2.5	2.0	---	---	8.8	7.1	12.0	10.7
18	15.1	14.8	9.9	9.3	2.0	1.5	---	---	7.0	5.8	12.1	11.5
19	15.4	14.1	9.7	9.4	2.0	1.5	---	---	5.8	5.7	11.7	11.0
20	14.3	13.1	12.4	9.5	3.2	1.9	---	---	6.4	5.8	11.3	11.0
21	13.9	13.5	12.3	10.8	4.3	3.2	---	---	8.3	6.5	11.1	9.0
22	14.2	12.8	10.7	9.5	6.5	4.2	---	---	8.3	7.5	9.0	8.5
23	13.1	12.4	9.4	8.8	9.1	6.5	---	---	7.4	5.2	8.5	8.3
24	13.5	12.4	8.8	8.0	10.2	9.2	---	---	5.1	3.8	8.8	8.3
25	12.3	11.7	8.3	8.0	10.1	8.8	5.3	4.5	4.4	3.4	10.1	8.6
26	12.4	11.2	8.9	8.0	8.7	7.2	6.0	5.3	5.1	3.9	11.5	9.9
27	11.8	10.4	9.6	8.9	7.2	6.9	6.1	5.5	5.1	4.4	12.3	11.2
28	11.8	11.2	10.0	9.5	7.4	7.0	6.3	5.5	5.2	4.5	13.6	12.4
29	11.5	10.5	9.5	8.1	7.0	6.1	8.2	6.3	---	---	14.5	13.5
30	11.2	10.6	8.0	7.1	6.1	5.6	8.6	7.6	---	---	15.1	14.4
31	10.9	10.5	---	---	5.8	5.6	9.5	6.5	---	---	14.7	13.4
MONTH	21.6	10.4	12.4	7.1	10.2	1.5	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.4	12.4	21.0	19.8	24.2	22.4	22.2	21.5	25.6	24.5	34.6	33.6
2	12.3	11.6	19.7	18.2	23.9	23.3	21.5	21.1	24.5	21.5	34.3	33.6
3	12.6	11.8	18.1	17.0	24.2	23.0	21.4	21.0	22.2	21.0	33.9	33.0
4	13.2	12.4	17.4	16.2	24.7	23.2	21.5	20.9	23.2	21.8	33.4	32.2
5	13.1	12.3	16.2	15.4	23.9	23.3	22.1	21.0	24.6	22.9	33.7	32.2
6	12.2	11.3	15.3	13.0	23.2	19.6	22.2	21.6	24.3	23.9	33.4	32.7
7	11.2	10.8	12.9	11.9	19.1	17.5	21.9	20.0	24.0	23.5	33.8	32.7
8	10.7	9.9	12.3	11.4	18.2	17.9	20.5	19.9	24.0	22.6	34.5	32.9
9	9.8	9.2	12.6	11.9	18.0	17.6	21.5	20.1	23.9	22.0	34.5	33.2
10	9.1	8.6	13.2	12.4	17.9	17.4	22.4	21.1	24.1	22.3	34.2	33.5
11	9.2	8.1	13.2	12.6	18.8	17.8	23.2	22.4	23.9	22.3	33.9	32.0
12	8.9	8.2	13.5	12.6	19.1	18.2	23.1	22.0	24.3	22.5	33.1	32.4
13	9.4	8.4	13.8	12.8	19.3	18.6	22.1	20.5	24.7	22.5	32.3	31.7
14	9.4	9.1	14.4	13.3	18.7	18.0	21.5	20.6	24.8	23.0	32.2	31.4
15	9.9	9.2	15.0	14.0	18.5	18.1	21.8	20.7	24.4	23.5	31.5	30.0
16	11.1	9.6	15.6	14.5	18.0	16.9	21.7	21.4	25.0	23.4	30.1	28.8
17	12.3	10.6	16.7	14.8	17.3	16.8	22.4	21.0	24.9	23.7	28.8	28.5
18	13.9	12.1	17.0	16.1	17.6	17.1	22.6	21.3	24.2	23.6	28.9	28.2
19	14.4	13.6	17.0	16.2	18.2	17.4	22.7	21.8	24.3	23.3	28.6	28.0
20	15.0	13.5	17.7	16.4	18.9	18.0	23.4	21.9	24.4	23.1	29.1	28.3
21	15.8	14.3	18.6	17.3	18.4	17.4	23.5	22.4	25.2	23.5	29.6	28.6
22	16.1	14.7	18.3	17.6	18.3	17.9	24.0	22.6	25.8	24.0	29.4	28.9
23	16.6	15.6	18.4	17.9	18.3	17.9	24.3	23.4	25.9	24.7	28.9	26.9
24	16.9	15.9	18.8	17.3	18.9	18.0	24.8	23.2	25.5	23.9	26.8	24.8
25	18.2	16.1	19.5	18.0	19.8	18.8	25.6	23.8	24.7	23.5	24.8	24.3
26	19.4	17.3	20.2	19.1	21.2	19.6	26.2	24.4	23.8	23.1	25.2	24.4
27	20.4	18.5	21.2	19.5	21.8	20.9	26.5	25.1	24.2	23.5	25.6	25.1
28	20.6	19.5	21.1	20.0	22.2	21.6	27.0	25.5	24.5	23.5	25.7	25.1
29	21.1	19.9	22.1	20.5	22.5	21.5	27.4	25.9	25.0	23.8	25.6	25.3
30	21.4	20.2	22.7	21.1	22.5	21.7	27.0	25.5	25.1	24.0	26.0	25.4
31	---	---	23.6	21.5	---	---	26.4	25.5	34.6	33.4	---	---
MONTH	21.4	8.1	23.6	11.4	24.7	16.8	27.4	19.9	34.6	21.0	34.6	24.3

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.8	8.3	10.4	10.2	12.0	11.8	12.3	11.1	11.8	11.6	12.2	12.0
2	8.7	8.2	10.4	10.2	12.3	12.0	11.2	10.8	11.7	11.6	12.1	12.0
3	8.6	8.2	10.5	10.2	12.4	12.3	11.5	11.2	11.6	11.4	12.3	11.6
4	8.9	8.3	10.3	10.0	12.7	12.4	11.8	11.4	11.7	11.6	11.6	11.1
5	9.1	8.5	10.1	9.9	12.8	12.7	11.9	11.7	11.8	11.6	11.1	10.6
6	9.4	8.7	10.4	9.8	12.8	12.7	12.0	11.7	12.2	11.8	10.9	10.5
7	9.5	9.0	10.8	10.4	13.1	12.7	12.5	11.7	12.6	11.8	---	---
8	9.6	9.0	10.9	10.8	13.1	12.9	12.3	11.9	13.0	12.6	---	---
9	9.6	9.2	11.0	10.8	13.1	12.9	12.0	11.3	13.3	12.8	---	---
10	9.6	9.2	10.9	10.6	13.2	13.0	12.2	11.5	13.5	13.2	---	---
11	9.6	9.2	10.9	10.7	13.2	13.0	12.2	11.5	13.5	13.4	---	---
12	9.9	9.2	10.9	10.8	13.2	13.0	12.1	9.8	13.5	13.4	---	---
13	10.0	9.5	11.0	10.9	13.2	13.1	---	---	---	---	---	---
14	10.3	9.6	11.1	10.9	13.3	13.2	---	---	---	---	10.3	10.1
15	10.3	9.7	11.2	10.8	13.3	13.2	---	---	---	---	10.1	9.8
16	10.2	9.7	11.0	10.7	13.4	13.2	---	---	11.6	11.4	10.1	10.0
17	10.1	9.7	11.0	10.7	13.3	13.2	---	---	12.0	11.5	10.1	10.0
18	9.8	9.6	11.0	10.9	13.4	13.3	---	---	12.7	12.1	10.0	9.9
19	10.1	9.5	11.0	11.0	13.4	13.3	---	---	12.6	12.3	10.1	9.8
20	10.2	9.7	11.0	9.4	13.3	13.2	---	---	12.3	12.0	10.1	9.9
21	9.9	9.6	10.7	9.8	13.2	12.8	---	---	12.0	11.4	11.1	10.1
22	10.1	9.7	11.0	10.2	12.9	12.1	---	---	11.6	11.2	11.5	11.1
23	10.2	9.9	11.1	11.0	12.2	10.8	---	---	12.2	11.6	11.5	11.4
24	10.1	9.8	11.3	11.0	11.5	10.6	---	---	12.8	12.2	11.4	11.2
25	10.3	9.9	11.5	11.3	11.3	10.6	13.0	12.7	12.7	10.8	11.2	10.8
26	10.4	10.1	11.4	11.2	11.7	11.3	12.8	12.4	11.4	10.6	10.9	10.4
27	10.3	10.1	11.2	10.9	11.8	10.5	12.6	12.4	12.2	10.6	10.4	10.2
28	10.2	10.0	11.0	10.7	11.6	10.8	12.5	12.2	12.2	12.0	10.2	9.9
29	10.3	10.0	11.6	11.0	12.1	11.5	12.1	11.1	---	---	9.8	9.6
30	10.4	10.2	11.8	10.6	12.3	12.1	11.6	10.3	---	---	9.6	9.3
31	10.3	10.2	---	---	12.4	12.2	12.0	11.2	---	---	9.8	9.3
MONTH	10.4	8.2	11.8	9.4	13.4	10.5	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.2	9.8	7.9	7.7	8.8	7.9	7.8	7.5	7.3	7.0	7.8	7.1
2	10.3	10.1	8.4	7.8	8.5	7.8	8.1	7.8	7.7	6.9	7.7	7.0
3	10.2	9.9	9.0	8.5	8.7	8.0	8.3	7.9	7.7	7.3	7.9	7.4
4	10.1	9.6	9.2	9.0	8.6	8.1	8.4	8.1	7.5	7.0	8.2	7.5
5	10.5	9.1	9.3	9.0	8.4	8.1	8.4	8.1	7.1	6.7	8.3	7.6
6	10.7	10.3	9.2	8.3	8.5	7.5	8.4	7.9	7.0	6.6	8.3	7.7
7	10.7	10.6	9.8	9.1	8.3	7.7	8.5	8.0	7.1	6.7	8.5	7.5
8	10.8	10.6	9.8	9.7	8.1	7.2	8.5	8.2	7.2	6.8	8.5	7.7
9	11.1	10.7	9.8	9.5	8.5	8.2	8.6	8.0	8.4	7.3	8.4	7.6
10	11.2	11.1	9.7	9.5	8.4	7.9	8.3	7.8	8.6	7.9	8.6	7.7
11	11.3	11.1	9.8	9.6	8.1	7.8	8.1	7.6	8.6	8.0	8.8	7.8
12	11.5	11.2	9.9	9.6	8.2	7.7	8.1	7.7	8.7	8.0	8.5	8.0
13	11.4	11.2	9.8	9.6	8.2	6.9	8.3	7.9	8.7	8.0	8.5	8.0
14	11.4	11.2	9.8	9.6	8.1	7.0	8.4	7.9	8.5	7.9	8.7	8.1
15	11.3	11.0	9.7	9.5	8.4	7.9	8.4	7.8	8.4	7.8	8.9	8.3
16	11.1	10.8	9.5	9.3	---	---	8.3	7.8	8.3	7.8	8.7	7.7
17	10.9	10.5	9.4	9.2	---	---	8.4	8.0	8.1	7.6	8.3	8.1
18	10.6	10.3	9.4	9.1	---	---	8.6	8.1	8.1	7.7	8.2	8.0
19	10.5	10.2	9.3	9.0	---	---	8.5	8.1	8.1	7.7	8.4	8.1
20	11.0	10.6	9.1	8.8	---	---	8.5	8.0	8.2	7.9	8.6	8.3
21	10.8	10.6	8.9	8.5	8.7	8.4	8.5	7.9	8.1	7.7	8.7	8.3
22	10.7	10.4	8.7	8.5	8.8	8.3	8.5	8.0	7.9	7.6	8.6	8.2
23	10.4	10.1	8.6	8.3	8.6	8.1	8.4	8.0	7.6	7.1	8.9	7.0
24	10.5	9.8	8.8	8.6	8.5	8.1	8.3	7.8	7.5	6.9	9.3	8.5
25	10.0	9.5	8.8	8.5	8.2	7.8	8.1	7.8	7.3	6.9	9.2	8.7
26	9.9	9.4	8.8	8.4	8.0	7.5	8.1	7.6	7.4	7.0	9.3	8.6
27	9.4	8.7	9.0	8.4	7.6	7.4	7.7	7.4	7.3	6.9	8.9	8.2
28	8.6	8.0	8.8	8.4	7.6	7.3	7.6	7.1	7.4	6.8	8.7	8.3
29	8.2	7.8	8.8	8.2	7.6	7.2	7.4	7.1	7.3	6.9	8.8	8.3
30	8.2	7.8	8.9	8.3	7.7	7.4	7.5	7.0	7.5	6.9	8.6	7.6
31	---	---	8.7	8.2	---	---	7.1	6.7	7.8	7.1	---	---
MONTH	11.5	7.8	9.9	7.7	---	---	8.6	6.7	8.7	6.6	9.3	7.0

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	244	13	8.5	223	7	3.9	1930	17	92
2	213	15	8.3	190	6	3.0	1490	9	35
3	191	12	6.1	168	5	2.4	1180	8	25
4	178	9	4.1	159	7	3.2	986	8	20
5	179	8	4.0	581	19	49	854	7	15
6	171	8	3.7	4640	195	2410	744	5	9.4
7	146	7	2.8	2890	74	625	681	3	5.5
8	130	5	1.7	1660	21	94	633	3	4.3
9	118	7	2.3	1090	8	23	591	7	12
10	112	7	2.0	866	8	18	556	8	12
11	103	7	1.8	1190	10	32	522	5	7.4
12	92	7	1.9	1180	9	28	475	4	4.9
13	87	10	2.2	926	8	20	451	3	4.2
14	82	7	1.6	774	9	19	440	6	7.1
15	80	7	1.5	660	14	24	427	5	6.3
16	79	9	2.0	580	12	19	407	8	8.5
17	82	10	2.2	977	12	32	388	6	6.2
18	85	11	2.6	1720	24	112	355	6	5.4
19	79	10	2.0	1440	10	44	340	7	6.3
20	74	8	1.7	18200	421	22500	335	9	7.8
21	84	10	2.4	13100	300	13400	572	10	18
22	110	7	2.1	4530	72	914	2970	95	852
23	116	4	1.3	2720	25	191	5700	132	2530
24	118	14	4.5	1930	20	104	8870	165	4340
25	144	8	3.0	1480	17	67	14700	371	16700
26	130	4	1.5	1170	12	38	5890	65	1070
27	123	6	1.9	1720	13	65	3510	38	360
28	137	6	2.2	4390	129	1550	2740	38	282
29	181	9	4.4	3710	36	367	3310	107	969
30	200	8	4.3	2600	21	146	2880	38	295
31	246	7	4.4	---	---	---	2640	32	230
TOTAL	4114	---	95.0	77464	---	42803.5	67567	---	27940.3
		JANUARY			FEBRUARY			MARCH	
1	5270	103	1880	845	60	138	2240	28	172
2	5410	34	518	773	55	114	2380	37	237
3	3610	26	253	841	52	122	2320	36	225
4	2720	20	146	1300	37	129	2200	30	180
5	2060	15	84	1450	22	85	5630	57	1230
6	2730	56	518	1800	26	129	37600	439	50000
7	4710	184	2380	2510	58	391	15400	156	8140
8	5470	137	2840	2350	46	291	5960	59	951
9	7510	160	3530	1930	24	123	3950	54	566
10	4420	76	903	1570	20	85	2960	52	418
11	3240	50	437	1460	44	174	2400	50	325
12	18800	798	65000	1340	56	204	2010	48	261
13	30200	694	65200	1210	47	155	1730	46	212
14	10100	191	5290	6250	452	16500	1510	42	173
15	11600	258	8640	11900	776	27200	1310	47	167
16	8620	120	2800	5790	262	4080	1110	28	85
17	5120	89	1230	5420	163	2390	952	30	77
18	3630	81	789	8400	101	2330	904	31	75
19	2790	64	482	6740	115	2020	1010	30	85
20	2240	51	309	5780	146	2370	1090	29	87
21	1820	41	202	25100	341	26200	4330	91	1350
22	1520	34	140	16200	217	10600	6090	97	1670
23	1320	32	113	6610	108	1990	3830	55	585
24	1180	31	99	4280	51	595	3140	36	307
25	1070	30	87	3160	20	173	2590	30	209
26	975	29	77	2680	37	263	2180	22	129
27	931	29	72	2400	45	292	1850	20	99
28	890	28	68	2220	23	139	1600	23	99
29	808	28	60	---	---	---	1410	16	62
30	782	27	58	---	---	---	1310	20	72
31	825	52	119	---	---	---	1580	30	136
TOTAL	152371	---	164324	132309	---	99282	124576	---	68384

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued
(National stream-quality accounting network station)

SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)	MEAN DISCHARGE (FT^3/S)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (T/DAY)
		APRIL			MAY			JUNE	
1	2250	81	503	900	5	12	457	2	3.0
2	1980	19	103	1530	10	43	388	3	3.0
3	1890	17	88	1310	6	20	370	2	2.1
4	4210	57	700	1000	4	10	402	4	4.9
5	9470	154	3820	1060	5	17	576	10	17
6	5460	85	1310	6640	161	3420	3620	56	1430
7	3670	36	367	5740	103	1680	9450	253	6930
8	3090	23	193	3440	48	450	3810	73	821
9	3610	24	240	2530	24	162	5260	56	955
10	3070	28	226	2520	23	157	7170	250	4790
11	2470	32	216	2150	14	80	3450	68	660
12	2040	30	162	1710	18	85	2160	28	162
13	1720	19	91	1400	7	26	5310	141	2920
14	1480	15	61	1140	5	16	5350	115	1790
15	1490	16	64	1010	13	35	7150	114	3960
16	1600	19	84	920	6	15	37500	762	78200
17	1350	12	45	767	4	8.9	9440	354	9300
18	1180	11	37	647	9	15	4250	223	2570
19	1060	8	22	585	6	9.5	2750	155	1150
20	969	9	23	963	20	64	5370	208	3570
21	884	6	14	2510	66	457	10700	325	9640
22	806	6	14	1590	22	92	5870	109	1760
23	747	5	9.9	1290	16	56	4880	63	853
24	708	8	15	1140	12	38	6660	243	4470
25	672	8	14	900	10	25	3490	85	835
26	625	4	6.7	711	8	15	2080	55	322
27	570	2	3.3	763	5	9.5	1490	18	73
28	594	15	25	1320	19	72	1510	17	72
29	573	4	6.1	948	5	14	1990	51	296
30	566	3	5.2	686	4	6.5	1650	30	129
31	---	---	---	556	3	3.9	---	---	---
TOTAL	60804	---	8468.2	50376	---	7114.3	154553	---	137688.0
		JULY			AUGUST			SEPTEMBER	
1	1140	26	80	1300	12	54	488	6	8.3
2	1010	28	76	4980	547	8200	902	28	84
3	970	25	65	2390	745	5000	1010	15	42
4	1040	29	89	1280	195	709	654	10	18
5	1750	41	210	813	57	127	469	6	7.3
6	1660	19	86	621	33	54	368	4	3.7
7	5920	331	6680	536	22	33	320	4	3.2
8	4730	214	2910	495	21	28	296	4	2.8
9	2690	59	437	389	11	12	251	3	2.1
10	1720	32	152	318	7	6.1	215	3	1.6
11	1210	14	46	272	6	4.4	591	50	113
12	2550	51	377	241	6	3.7	1960	86	479
13	5330	197	3030	216	5	2.9	1000	29	80
14	3240	91	832	194	5	2.6	748	25	54
15	1980	47	251	185	5	2.7	1980	95	686
16	1320	26	93	175	4	1.7	11100	406	13200
17	1030	14	38	227	17	12	5050	133	1950
18	835	9	21	258	12	8.2	2450	34	233
19	662	10	17	366	21	24	1550	18	76
20	626	11	19	306	6	5.5	1070	9	25
21	622	6	10	234	2	1.1	809	14	29
22	846	19	48	199	1	.62	945	22	68
23	790	4	8.2	194	3	1.8	11500	403	16700
24	715	15	31	384	13	18	8900	256	5990
25	655	4	6.3	1760	65	338	4040	181	2080
26	499	4	5.8	947	17	43	5200	91	1280
27	389	4	4.5	1040	38	119	5110	71	924
28	326	2	1.9	865	21	49	2930	65	515
29	291	3	2.1	637	20	35	2100	44	250
30	298	5	4.1	523	16	22	2640	29	208
31	927	11	32	521	7	10	---	---	---
TOTAL	47771	---	15662.9	22866	---	14928.32	76646	---	45113.0
YEAR	971417		631903.52						

03414000 CUMBERLAND RIVER NEAR ROWENA, KY

LOCATION.--Lat 36°53'02", long 85°08'22", Russell County, Hydrologic Unit 05130103, on right bank 1.5 mi downstream from Wolf Creek Dam, 1.9 mi west of Rowena, 2.0 mi upstream from Blackfish Creek, and at mile 459.4.

DRAINAGE AREA.--5,790 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1306.

REVISED RECORDS.--WSP 953: Drainage area. WSP 1336: 1940.

GAGE.--Water-stage recorder. Datum of gage is 540.81 ft Sandy Hook datum. Prior to Oct. 24, 1940, nonrecording gage at same site and datum. Oct. 1, 1943 to Sept. 30, 1948, auxiliary nonrecording gage at Rowena Ferry, 2.9 mi upstream.

REMARKS.--Estimated daily discharges: Dec. 20, 21. Records good above 2,000 ft^3/s, and poor below. Flow regulated by Lake Cumberland beginning March 1950 (station 03413500). Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--50 years, 8,992 ft^3/s, 21.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 162,000 ft^3/s, Jan. 9, 1946, gage height, 64.82 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1826 reached a stage of 69.5 ft, from profile of Cumberland River.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32,800 ft^3/s, Mar. 5, gage height, 24.43 ft; minimum daily, 802 ft^3/s, Nov. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2040	2560	11300	6760	17000	27400	19200	3550	4750	27400	14200	11300
2	2080	3080	12200	10600	14200	27400	6790	3500	4700	27700	14400	8030
3	2200	2530	4310	10400	13500	27700	11300	4120	2750	28000	14000	6730
4	2150	2630	3530	15600	10600	27900	14300	4150	1800	19000	13800	6790
5	2050	1590	11400	12100	6350	30500	19900	5850	3050	18400	9710	10900
6	2080	1070	7550	10500	19000	30800	27700	6440	6090	17300	4740	12000
7	2140	2510	6490	7810	22000	27500	27900	14500	10000	18100	6850	12500
8	1580	2560	7370	6650	22100	26500	27700	17400	12700	13600	7080	11700
9	1850	2550	14800	13600	21800	26300	27800	16600	12600	12500	6970	8390
10	1860	2560	7080	15400	22100	26300	27700	16800	12500	13800	7010	6950
11	2180	2500	6640	14000	7870	26300	19700	16400	12100	13600	7150	10100
12	2100	1620	12600	13500	5070	26400	17600	16600	13000	13600	4450	10200
13	2230	975	14100	13800	8170	26400	17700	16700	15900	14100	8650	10600
14	2180	1550	13500	16800	8900	26300	8280	16100	18700	13400	11300	8820
15	2180	1510	7610	13100	8520	26700	6450	17000	20000	12800	11800	8770
16	2360	1750	13400	17800	8190	26800	4420	13000	21000	8920	11700	7100
17	2450	1600	6290	19000	10100	26700	6660	11600	27100	13000	11700	3830
18	2460	1710	2000	18000	4990	26900	6850	8740	26800	13300	11900	5370
19	2050	1050	12700	23100	5170	27100	6660	11600	26600	13800	10300	5590
20	2290	893	13000	22000	17500	27200	6750	9540	26600	13000	6860	5660
21	2150	1510	11000	20300	13400	29100	6990	2810	26500	14100	9530	5610
22	1390	1510	7130	20100	16600	28000	4150	4120	26300	9350	9720	5760
23	942	6940	6860	20300	26100	27300	1330	5060	26200	8020	10000	3900
24	3130	1770	4620	19500	26700	27600	4580	8280	26100	13200	10100	5340
25	2900	1580	4350	20100	27000	27400	7050	14200	26100	13600	10100	5490
26	2960	802	6140	19600	27200	27700	5440	15300	26000	14100	7210	5160
27	3190	3680	7250	20500	27200	27600	3470	15600	26100	14200	6890	5510
28	3000	6100	5890	21100	27300	27900	3560	6310	26500	13900	11500	5280
29	2600	11200	14900	10600	---	28000	1320	3780	27200	9580	12100	5830
30	1180	12000	7960	20700	---	28200	2150	6970	27100	8720	11600	6040
31	2530	---	6290	18200	---	28800	---	4020	---	13100	11600	---
TOTAL	68482	85890	270260	491520	444630	852700	351400	316640	542840	457190	304920	225250
MEAN	2209	2863	8718	15860	15880	27510	11710	10210	18090	14750	9836	7508
MAX	3190	12000	14900	23100	27300	30800	27900	17400	27200	28000	14400	12500
MIN	942	802	2000	6650	4990	26300	1320	2810	1800	8020	4450	3830
CFSM	.38	.49	1.51	2.74	2.74	4.75	2.02	1.76	3.13	2.55	1.70	1.30
IN.	.44	.55	1.74	3.16	2.86	5.48	2.26	2.03	3.49	2.94	1.96	1.45

CAL YR 1988 TOTAL 1656568 MEAN 4526 MAX 14900 MIN 174 CFSM .78 IN. 10.64
WTR YR 1989 TOTAL 4411722 MEAN 12090 MAX 30800 MIN 802 CFSM 2.09 IN. 28.34

03435140 WHIPPOORWILL CREEK NEAR CLAYMOUR, KY

LOCATION.--Lat 36°52'29", long 87°05'20", Todd County, Hydrologic Unit 05130206, on left bank at downstream side of bridge on country road, 0.4 mi downstream from North Fork, 1.5 mi southeast of Claymour, and at mile 37.6.

DRAINAGE AREA.--20.8 mi^2.

PERIOD OF RECORD.--May 1973 to current year.

REVISED RECORD.--WRD KY 75-1: 1974(M). WRD KY 86-1: 1984(M).

GAGE.--Water-stage recorder. Datum of gage is 607.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 3, Jan. 5 to Feb. 18 and Mar. 5 to Apr. 7. Records fair except for periods of estimated daily discharge, which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--16 years, 33.9 ft^3/s, 22.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,380 ft^3/s, Mar. 12, 1975, gage height, 17.75 ft, from floodmark in gage house, from rating curve extended above 870 ft^3/s, on basis of slope-area measurement of peak flow; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0430	2,040	11.04	Feb. 20	2315	1,410	9.11
Dec. 24	1015	1,640	9.82	May 20	0315	1,270	8.64
Dec. 28	0745	1,620	9.75	July 2	1200	3,310	13.37
Feb. 14	Unknown	*3,800	*14.12	Aug. 1	0200	1,470	9.31

Minimum daily discharge, 0.31 ft^3/s, Sept. 21-24, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	16	11	15	9.4	20	90	4.6	3.0	721	317	6.5
2	2.1	13	9.1	11	9.0	16	80	4.1	2.7	1300	15	4.3
3	1.2	19	8.4	9.5	15	15	70	3.1	2.5	122	5.7	1.6
4	.78	40	7.6	7.5	30	13	220	3.4	2.4	85	3.2	1.4
5	.64	39	6.9	7.0	80	150	170	6.2	2.2	62	2.6	1.2
6	.58	8.2	6.6	10	50	100	120	6.5	2.1	33	179	.95
7	.77	5.1	6.3	20	35	60	80	3.6	2.0	19	23	.83
8	1.0	3.8	5.9	25	23	45	37	2.9	1.8	12	7.7	.67
9	1.1	3.0	5.6	18	15	35	25	4.6	1.8	8.4	4.2	.61
10	1.5	85	5.5	14	11	28	19	4.6	1.7	6.4	2.2	.61
11	1.6	16	5.3	25	10	24	15	3.2	1.6	5.0	1.8	.61
12	1.6	8.6	5.1	45	9.4	20	13	2.4	201	4.2	1.7	.53
13	1.5	6.2	5.0	70	9.0	17	11	2.1	177	16	1.4	.49
14	1.6	4.9	5.0	60	1500	15	9.7	1.9	28	5.2	1.3	.49
15	1.8	4.3	4.9	90	1700	13	12	1.5	51	3.6	1.2	.49
16	2.0	3.0	4.8	35	200	12	9.6	1.3	23	3.5	.95	.49
17	3.0	3.3	4.8	25	120	11	8.1	1.1	12	3.3	.90	.49
18	3.8	4.4	4.6	20	50	11	7.7	1.2	18	3.2	.81	.49
19	4.3	759	4.6	16	34	12	6.7	1.1	118	3.1	.81	.49
20	4.8	716	4.6	14	469	15	5.7	320	44	3.0	.61	.35
21	5.3	45	134	12	366	40	5.2	15	27	2.8	.61	.31
22	5.8	26	25	10	65	120	4.6	48	20	2.7	.51	.31
23	6.4	18	339	9.0	38	80	4.3	46	11	2.5	.49	.31
24	7.3	14	580	8.4	27	60	4.1	12	7.2	2.4	5.1	.31
25	7.9	12	66	7.8	24	45	3.8	7.7	5.4	2.2	2.3	.47
26	9.1	135	35	7.4	22	35	3.4	5.9	4.2	2.1	7.4	.49
27	10	82	26	7.2	20	25	136	4.7	3.9	2.0	2.3	.42
28	18	27	590	7.0	21	21	31	3.6	17	2.5	1.6	.31
29	22	17	46	6.8	---	20	10	3.5	8.8	5.2	1.3	.34
30	20	13	26	8.0	---	50	6.2	3.3	4.7	4.5	1.0	5.3
31	18	---	17	10	---	100	---	3.1	---	80	.84	---
TOTAL	166.22	2146.8	2005.6	630.6	4961.8	1228	1218.1	532.2	805.0	2527.8	594.53	32.16
MEAN	5.36	71.6	64.7	20.3	177	39.6	40.6	17.2	26.8	81.5	19.2	1.07
MAX	22	759	590	90	1700	150	220	320	201	1300	317	6.5
MIN	.58	3.0	4.6	6.8	9.0	11	3.4	1.1	1.6	2.0	.49	.31
CFSM	.26	3.44	3.11	.98	8.52	1.90	1.95	.83	1.29	3.92	.92	.05
IN.	.30	3.84	3.59	1.13	8.87	2.20	2.18	.95	1.44	4.52	1.06	.06

CAL YR 1988 TOTAL 10010.56 MEAN 27.4 MAX 1320 MIN .00 CFSM 1.31 IN. 17.90
WTR YR 1989 TOTAL 16848.81 MEAN 46.2 MAX 1700 MIN .31 CFSM 2.22 IN. 30.13

03438000 LITTLE RIVER NEAR CADIZ, KY

LOCATION.--Lat 36°46'40", long 87°43'18", Trigg County, Hydrologic Unit 05130205, on right bank at upstream side of bridge on State Highway 1253, 50 ft downstream from Casey Creek, 8.8 mi southeast of Cadiz, and at mile 34.3.

DRAINAGE AREA.--244 mi^2, of which about 94 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--February 1940 to current year.

REVISED RECORDS.--WSP 1173: 1942-43, 1946(M), 1949. WSP 1306: 1940(M). WSP 1626: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 391.45 ft above National Geodetic Vertical Datum of 1929. Prior to July 31, 1945, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 14-22 and Mar. 8-15. Records good except for those estimated daily discharges which are fair. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--49 years, 351 ft^3/s, 19.54 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft^3/s, May 7, 1984, gage height, 22.45 ft; minimum observed, 1.0 ft^3/s, Oct. 3, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s))	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0300	7,020	16.74	Feb. 21	Unknown	e4,500	Unknown
Dec. 28	2030	3,570	10.84	Mar. 5	1830	5,570	13.91
Jan. 15	0700	4,970	13.10	Apr. 4	0230	7,160	15.87
Feb. 3	2300	5,550	13.89	June 12	1830	5,170	13.37
Feb. 14	0700	*9,300	*17.84	July 2	1030	8,230	17.02

e Estimated

Minimum discharge, 16 ft^3/s, Oct. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	29	527	732	409	796	1200	204	128	371	156	103
2	236	25	461	651	389	725	856	198	129	5260	251	104
3	135	23	412	566	4460	684	1510	188	142	5070	167	123
4	72	38	370	495	3680	639	5550	195	330	1960	160	93
5	51	416	330	445	1810	3050	2680	205	301	1560	150	79
6	42	282	303	554	1390	4270	1600	209	193	1250	152	72
7	37	144	279	645	1030	2060	1200	201	156	1300	545	69
8	31	107	255	1020	831	1300	1030	191	142	870	255	63
9	30	86	238	850	702	1000	892	190	133	687	188	61
10	29	83	223	663	607	800	785	202	126	582	156	58
11	25	176	208	580	546	740	709	193	115	506	140	56
12	24	129	195	1660	495	660	605	183	1900	504	130	54
13	21	91	187	2020	978	620	559	178	3430	448	120	50
14	21	75	178	2820	6800	580	528	174	1410	398	114	49
15	21	67	168	4150	7200	560	509	169	905	350	110	62
16	20	68	158	1920	5000	525	474	161	744	317	109	66
17	20	66	150	1360	3000	495	434	155	597	289	107	58
18	19	76	140	1080	2600	480	410	152	665	273	102	51
19	18	2340	137	912	2000	464	378	149	674	259	97	47
20	19	4910	131	782	2000	526	343	378	519	247	96	45
21	18	2190	144	674	4000	1010	331	299	425	231	111	42
22	17	1210	231	606	2400	853	324	197	365	218	97	41
23	17	889	425	559	1760	672	312	230	319	206	79	40
24	23	727	857	518	1470	603	298	206	289	195	83	37
25	26	616	1010	477	1190	533	286	174	269	186	163	40
26	31	925	532	444	1060	488	270	160	244	175	107	41
27	24	1640	523	602	960	455	247	153	231	166	311	41
28	27	1010	2670	508	877	430	231	146	334	159	158	38
29	50	730	2070	456	---	600	223	140	896	149	118	38
30	50	618	1120	443	---	966	224	136	521	148	102	42
31	36	---	839	439	---	1750	---	132	---	147	93	---
TOTAL	1275	19786	15571	29631	59644	29334	24998	5848	16632	24481	4727	1763
MEAN	41.1	660	502	956	2130	946	833	189	554	790	152	58.8
MAX	236	4910	2670	4150	7200	4270	5550	378	3430	5260	545	123
MIN	17	23	131	439	389	430	223	132	115	147	79	37
CFSM	.17	2.70	2.06	3.92	8.73	3.88	3.42	.77	2.27	3.24	.62	.24
IN.	.19	3.02	2.37	4.52	9.09	4.47	3.81	.89	2.54	3.73	.72	.27

CAL YR 1988 TOTAL 108913 MEAN 298 MAX 5330 MIN 14 CFSM 1.22 IN. 16.60
WTR YR 1989 TOTAL 233690 MEAN 640 MAX 7200 MIN 17 CFSM 2.62 IN. 35.63

CUMBERLAND RIVER BASIN

03438190 BARKLEY-KENTUCKY CANAL NEAR GRAND RIVERS, KY

LOCATION.--Deflection-meter Gage: Lat 36°59'23", long 88°13'17", Lyon County, Hydrologic Unit 05130205, on north pier of bridge on State Highway 453, 1.1 mi southeast of Grand Rivers. Kentucky Lake Gage: Lat 36°59'15", long 88°13'34", Lyon County, Hydrologic Unit 06040005, on north bank of Barkley-Kentucky Canal, at Kentucky Lake end of canal (Tennessee River basin), 1.1 mi southeast of Grand Rivers, and 2.9 mi upstream from Kentucky Dam.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Deflection-meter recorder and water-stage recorder. Prior to Apr. 8, 1967, water-stage recorders. Datum of stage gages is 300.00 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair except those computed by slope rating, Nov. 21 to Dec. 1, which are poor. Figures of discharge represent net flow between Lake Barkley in Cumberland River basin and Kentucky Lake in Tennessee River basin. Canal initially opened on June 13, 1966. Canal is 1.8 mi long with a bottom width of 400 ft. Under normal operating conditions at Barkley Dam and Kentucky Dam, elevation at full pool is 359 ft and ordinary minimum pool is 354 ft. Minimum pool in advance of floods is at elevation 346 ft, canal depth 11 ft at this elevation. Maximum pool is at elevation 375 ft. Canal used for navigation and transfer of water between Kentucky and Barkley lakes. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--23 years, -6,797 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge Kentucky Lake to Lake Barkley, 48,000 ft^3/s, May 28, 1974; Lake Barkley to Kentucky Lake, 68,300 ft^3/s, Feb. 23, 1989; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge Kentucky Lake to Lake Barkley, 42,200 ft^3/s, Nov. 24; Lake Barkley to Kentucky Lake, 68,300 ft^3/s, Feb. 23. No flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1770	-6830	-21800	5410	-18900	-23700	13800	3480	-13500	3670	-18100	-14200
2	2020	-6130	-17800	-3670	-17500	-29300	10200	4360	-14300	8890	-17600	-14800
3	144	-5880	-25000	-13200	2410	-31300	9740	9250	-157	15900	-14300	-19500
4	-3970	-19	-4370	-19000	5570	-31400	31900	-9410	2210	18600	-16100	-26400
5	-7880	858	-23300	-18900	5330	-19200	34000	-21500	2320	17700	-19600	-25500
6	-7910	2450	-23700	-10100	2180	34500	21300	-2220	3860	6250	-16400	-21100
7	-7470	-2730	1470	-8120	-5210	53100	9970	-3690	-6380	-3690	-14100	-21400
8	-6240	-5250	566	-2780	-6160	52500	-1930	-8570	-11500	-8380	-15500	-20400
9	1720	-12300	-6020	-925	-7810	43400	-1650	-6780	-20100	-15700	-10500	-17900
10	-5810	-2750	-3760	-4320	-7090	8540	7640	-20700	-13800	-16200	-15900	-15400
11	4850	-7460	-3000	-1260	-6000	-15200	-5320	-19900	-13900	-5530	-4080	-20100
12	-3630	-11200	-12800	9970	-12700	-15700	-15100	-19700	-18100	-9980	-9620	-19100
13	-7240	4590	-16700	23000	-12700	-11600	-14100	-9640	8250	-9160	-10400	-22200
14	-7390	-7270	-14300	31300	17300	-11600	-15000	-10100	26500	-8470	-18000	-20800
15	-1300	-9060	1430	34600	38400	-11700	-12300	-3850	6640	-10600	-17600	-19900
16	-12	1040	-6190	26000	52600	-16400	-2710	-7440	30500	-8900	-14400	-20800
17	-4160	-11300	2580	9250	66600	7810	-8270	-13800	31200	-21400	-12000	-17200
18	2610	-12000	6110	-12000	47900	32800	-21800	-23900	11300	-31400	-11200	-20300
19	-6920	-4080	4250	-9550	-5970	28500	-13300	-19200	-10400	-27400	-7100	-29100
20	-7320	524	5120	-5690	-35700	20800	-7160	-751	-15800	-26800	-5550	-29900
21	-7610	38500	9190	-10800	-38100	17100	-8190	8150	-17800	-28000	-15400	-32300
22	-5660	-2630	8760	-8070	27800	23400	296	-714	-19500	-29000	-13500	-31200
23	-2290	-39300	18100	-1210	68300	27300	5460	-14600	-22400	-23400	-23700	-21800
24	-2830	-42200	11300	9420	43700	24800	7060	-17500	-28000	-23600	-22500	-8130
25	-7430	-38300	36400	-3640	-15600	20900	-5680	-20900	-35100	-27400	-18700	-8810
26	-8370	-37300	20800	-13300	-34000	14400	-2960	-18000	-34900	-25200	-11200	-24600
27	-10100	-30600	-2690	-16900	-26800	9520	-3360	-3020	-33300	-20000	-11800	-31500
28	-278	-28400	-490	-18700	-16400	5990	1700	6900	-27400	-17000	-14700	-33100
29	-7080	-33900	-2690	-19300	---	6870	7200	-2670	-5730	-13500	-21000	-33200
30	-1510	-25000	4660	-20000	---	16600	11200	-7400	1030	-16100	-20200	-32700
31	-473	---	13000	-20500	---	17800	---	-12100	---	-17000	-17500	---
TOTAL	-117769	-333927	-40874	-92985	111450	249530	32636	-265915	-238257	-372800	-458250	-673340
MEAN	-3799	-11130	-1319	-3000	3980	8049	1088	-8578	-7942	-12030	-14780	-22440
MAX	4850	38500	36400	34600	68300	53100	34000	9250	31200	18600	-4080	-8130
MIN	-10100	-42200	-25000	-20500	-38100	-31400	-21800	-23900	-35100	-31400	-23700	-33200

CAL YR 1988 TOTAL -916784 MEAN -2505 MAX 44600 MIN -42200
WTR YR 1989 TOTAL -2200501 MEAN -6029 MAX 68300 MIN -42200

03438220 CUMBERLAND RIVER NEAR GRAND RIVERS, KY

LOCATION.--Lat 37°01'18", long 88°13'16", Lyon County, Hydrologic Unit 05130205, on right bank in powerhouse at Barkley Dam, 0.7 mi upstream from bridge on U.S. Highway 62 and 641, 1.5 mi northeast of Grand Rivers, and at mile 30.6.

DRAINAGE AREA.--17,598 mi^2.

PERIOD OF RECORD.--February 1939 to current year (fragmentary prior to March 1940). Monthly discharge only for some periods, published in WSP 1306. Prior to October 1964, published as "at Smithland."

REVISED RECORD.--WSP 1173: 1974(M). WSP 1336: 1940-43.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WDR KY-88-1 for history of changes prior to Dec. 28, 1965.

REMARKS.--No estimated daily discharges. Records fair except those below 10,000 ft^3/s, which are poor. Regulation of navigation dams on Cumberland River, and by Lake Cumberland, Dale Hollow Reservoir, Great Falls Lake, Center Hill Reservoir, Old Hickory Lake, J. Percy Priest Reservoir, and Lake Barkley. Barkley-Kentucky Canal (station 03438190) diverts water from or to Kentucky Lake in Tennessee River basin.

COOPERATION.--Discharges for days of negative fall or excessive fall were provided by the U.S. Army Corps of Engineers.

AVERAGE DISCHARGE.--25 years (Water years 1941-65, prior to opening of Barkley-Kentucky Canal), 27,510 ft^3/s, 21.23 in/yr, unadjusted; 24 years (Water years 1966-89, since opening of Barkley-Kentucky Canal), 36,500 ft^3/s, 28.12 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 209,000 ft^3/s, Mar. 16, 1975; maximum gage height, 49.04 ft, Mar. 30, 1975; no flow July 2, 3, 1964 (construction cofferdam closed).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January to February 1937 reached a stage of 51.1 ft, former site and datum, 60.3 ft, present site and datum (from U.S. Army Corps of Engineers river profile).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 127,000 ft^3/s, Feb. 15; maximum gage height, 41.03 ft, Feb. 24; minimum daily discharge, 5,510 ft^3/s, Oct. 31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8920	6000	56300	49300	56400	102000	48700	6910	29600	50200	37800	34600
2	8440	6000	56200	50500	56300	98600	48400	6390	30500	64300	42000	38400
3	8330	6000	37200	51900	55600	97600	47400	8330	11500	83000	47900	38400
4	8910	6000	36900	53200	54700	96900	56600	25100	10600	71500	47900	39000
5	8760	6000	53300	54000	53500	96800	73500	45800	6300	58600	47900	37800
6	8650	6000	44900	53800	52300	105000	75700	9250	16200	67800	41700	32000
7	8970	7660	18600	53600	51000	117000	63900	23000	22300	79100	31900	32100
8	8640	13100	19400	52800	51200	117000	47000	23400	38200	80300	22900	33000
9	8920	14300	18600	52300	51200	117000	43000	32100	49900	81200	26900	32600
10	8560	14600	20400	51000	52500	110000	44000	45800	49700	71200	19400	32600
11	8690	14700	19800	50300	54800	97200	56000	51200	49100	55000	19500	32900
12	8800	14200	35400	65100	56300	97200	66700	50300	49600	55100	21100	32800
13	8850	14600	36700	85800	57000	92800	67400	35100	55000	55900	18700	32300
14	8670	14700	32500	90300	82900	86400	67900	33900	62600	34100	27100	33300
15	8230	14100	25900	100000	120000	86600	59000	34000	78300	56700	28100	35500
16	8840	14500	25800	110000	115000	79200	49900	28900	82400	55800	28300	35200
17	8570	14800	6120	100000	114000	57800	46500	40100	81700	56000	26700	35600
18	9200	15000	6100	86700	116000	47400	47200	36100	82400	57000	27000	43000
19	8750	32700	8500	81800	109000	50100	33100	29100	82400	57300	19200	55000
20	8810	56800	8650	76200	103000	51000	28400	18900	81700	58400	18600	54700
21	8050	54500	9200	77900	114000	51700	23000	14200	79900	57700	32400	54900
22	8920	53600	16600	78800	120000	51400	9600	24800	78700	58100	21200	49400
23	8550	52800	34000	65000	111000	50100	9600	37000	76000	57100	37800	46100
24	8920	52000	56400	51800	107000	49300	9640	36100	76600	54700	38000	57800
25	8950	51500	65700	53900	106000	48800	19000	36700	78800	50300	38400	56600
26	9080	51400	78100	55300	106000	48300	17700	37400	79000	47700	28200	55800
27	8350	51800	75800	56300	103000	47500	9570	22800	79000	42100	28200	56100
28	9350	53400	74000	56500	100000	47100	10100	34100	73400	42100	25800	56400
29	8910	54600	73700	56500	---	48100	6020	34000	59300	42900	38100	57500
30	9260	55400	58400	56400	---	49000	6320	33800	50600	42100	31100	58200
31	5510	---	49200	56300	---	48700	---	35200	---	38200	35100	---
TOTAL	268360	822760	1158370	2033300	2329700	2343600	1190850	929780	1701300	1781500	954900	1289600
MEAN	8657	27430	37370	65590	83200	75600	39690	29990	56710	57470	30800	42990
MAX	9350	56800	78100	110000	120000	117000	75700	51200	82400	83000	47900	58200
MIN	5510	6000	6100	49300	51000	47100	6020	6390	6300	34100	18600	32000

CAL YR 1988	TOTAL	6528020	MEAN	17840	MAX	83200	MIN	1840
WTR YR 1989	TOTAL	16804020	MEAN	46040	MAX	120000	MIN	5510

03610200 CLARKS RIVER AT ALMO, KY

LOCATION.--Lat 36°41'30", long 88°16'25", Calloway County, Hydrologic Unit 06040006, on left bank at downstream side of bridge on State Highway 464, 0.3 mi southeast of Almo, 5.1 mi upstream from Rockhouse Creek, and at mile 53.5.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 413.46 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-6, Oct. 28 to Nov. 2, Jan. 20-25, June 13, 14 and July 27. Records fair except those for estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--7 years, 199 ft^3/s, 20.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s, Dec. 25, 1982, gage height, 17.40 ft; minimum daily, 1.6 ft^3/s, Aug. 29, Sept. 6, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	2330	9,560	15.93	Feb. 21	0330	5,300	14.35
Dec. 28	1530	6,920	15.09	Mar. 5	2300	4,640	13.99
Jan. 12	2000	4,300	13.76	Apr. 4	1430	6,810	15.05
Jan. 14	2400	6,230	14.80	June 12	2100	4,660	14.00
Feb. 3	1900	8,610	15.65	July 2	1630	6,450	14.90
Feb. 14	1600	*15,800	*17.35				

Minimum discharge, 3.1 ft^3/s, Sept. 10, 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	5.6	74	106	58	353	372	18	13	24	14	4.7
2	9.6	5.4	59	83	199	254	173	17	32	4460	11	11
3	7.4	6.2	52	67	6960	205	1010	17	16	1410	10	7.9
4	6.0	115	45	53	1850	192	5610	18	18	347	9.8	4.2
5	5.2	430	40	57	368	3020	682	21	72	173	9.3	4.1
6	4.6	77	38	256	205	2560	404	22	21	101	9.3	3.9
7	4.7	48	36	106	147	522	379	18	16	70	8.6	3.7
8	5.1	41	34	476	126	389	416	17	15	50	8.0	3.5
9	5.2	41	31	99	110	308	371	20	15	39	7.6	3.4
10	5.7	181	30	63	100	234	205	18	14	30	7.8	3.2
11	5.9	62	29	266	94	192	126	17	14	24	7.5	3.1
12	5.9	44	28	2750	90	162	94	16	2790	139	7.4	3.7
13	6.5	40	28	977	1610	142	73	16	820	652	6.7	3.6
14	6.9	38	28	2840	11200	129	60	15	400	87	6.2	13
15	7.3	38	27	3290	9760	116	64	15	526	44	6.0	13
16	7.7	86	26	422	5500	105	58	15	312	32	6.0	5.1
17	11	66	25	257	678	100	47	15	123	25	5.8	3.9
18	9.9	357	25	162	467	109	40	15	139	22	5.7	3.8
19	10	7310	25	121	406	106	35	15	548	235	5.4	3.9
20	10	7130	25	90	1630	289	30	17	341	46	5.6	3.8
21	12	724	407	76	3690	1620	28	15	91	21	5.9	3.7
22	11	215	167	64	561	437	27	16	62	18	5.4	3.9
23	30	121	496	54	397	253	24	52	249	16	4.9	3.8
24	28	95	1660	48	291	149	23	18	352	15	4.9	3.7
25	9.9	81	378	46	227	101	22	16	54	15	4.8	3.9
26	7.3	1110	136	199	205	75	21	15	32	14	4.9	5.0
27	6.9	1580	175	236	215	59	21	15	51	14	4.7	5.5
28	7.0	264	5790	92	264	53	21	15	59	13	4.5	7.0
29	6.6	127	1210	91	---	269	32	14	56	12	4.8	10
30	6.2	94	167	91	---	285	19	14	31	12	4.8	15
31	5.8	---	133	72	---	1110	---	14	---	20	4.4	---
TOTAL	282.3	20532.2	11424	13610	47408	13898	10487	546	7282	8180	211.7	168.2
MEAN	9.11	684	369	439	1693	448	350	17.6	243	264	6.83	5.61
MAX	30	7310	5790	3290	11200	3020	5610	52	2790	4460	14	15
MIN	4.6	5.4	25	46	58	53	19	14	13	12	4.4	3.1
CFSM	.07	5.11	2.75	3.28	12.6	3.35	2.61	.13	1.81	1.97	.05	.04
IN.	.08	5.70	3.17	3.78	13.16	3.86	2.91	.15	2.02	2.27	.06	.05

CAL YR 1988 TOTAL 65831.9 MEAN 180 MAX 7310 MIN 1.8 CFSM 1.34 IN. 18.28
WTR YR 1989 TOTAL 134029.4 MEAN 367 MAX 11200 MIN 3.1 CFSM 2.74 IN. 37.21

03610545 WEST FORK CLARKS RIVER NEAR BREWERS, KY

LOCATION.--Lat 36°46'348, long 88°28'03", Marshall County, Hydrologic Unit 06040006, on left bank at downstream side of bridge on State Highways 58 and 80, 400 ft upstream from Moss Branch, 1.3 mi upstream from Soldier Creek, 1.7 mi northwest of Brewers, and at mile 20.8.

DRAINAGE AREA.--68.7 mi^2.

PERIOD OF RECORD.--October 1968 to September 1983, December 1988 to September 1989.

GAGE.--Water-stage recorder. Datum of gage is 370.05 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 1-12, Feb. 14-21, Apr. 29 to May 1 and June 12 to July 28. Records fair except those for estimated daily discharges which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--15 years (Water years 1969-83), 95.5 ft^3/s, 18.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,370 ft^3/s, Mar. 12, 1975, gage height, 17.61 ft, from rating curve extended above 3,800 ft^3/s; minimum daily, 1.1 ft^3/s, Sept. 16, 17, 1980.

EXTREMES FOR CURRENT PERIOD.--December 1988 to September 1989: Peak discharge greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 28	0200	5,150	13.90	Mar. 5	0630	3,470	12.00
Jan. 12	0915	3,270	11.74	Mar. 31	0015	2,590	10.74
Jan. 14	1415	3,360	11.87	Apr. 4	0115	4,150	12.82
Feb. 3	1315	6,430	15.16	June 12	1800	3,080	11.48
Feb. 14	0715	*8,450	*16.90	July 2	Unknown	e4,800	Unknown

e Estimated

Minimum daily discharge, 2.4 ft^3/s, July 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	40	131	48	129	162	17	92	15	25	14
2	---	---	36	97	155	125	103	16	80	2500	19	15
3	---	---	34	77	4130	116	492	15	80	500	19	10
4	---	---	30	61	519	347	2120	17	89	200	14	8.2
5	---	---	28	92	320	2690	307	31	46	100	12	8.0
6	---	---	26	168	244	812	220	34	27	70	12	7.2
7	---	---	25	246	182	311	168	20	18	50	12	6.4
8	---	---	24	297	142	231	142	18	14	40	9.2	6.6
9	---	---	23	120	117	167	124	22	12	30	8.4	5.8
10	---	---	21	85	106	116	99	18	9.0	22	7.8	6.2
11	---	---	21	84	104	91	85	15	7.2	15	7.2	9.9
12	---	---	20	1380	99	75	76	13	1500	50	7.0	14
13	---	---	21	311	2230	66	70	13	300	350	6.6	17
14	---	---	21	1600	7000	61	65	12	35	90	6.2	23
15	---	---	19	492	5000	53	64	12	40	30	6.4	24
16	---	---	17	242	1900	47	62	11	20	21	6.4	24
17	---	---	17	170	700	45	57	10	10	17	14	12
18	---	---	16	124	500	51	54	9.4	11	12	10	10
19	---	---	17	92	300	46	51	8.3	60	150	7.8	8.7
20	---	---	18	72	1700	158	47	12	35	50	16	7.9
21	---	---	28	59	700	365	43	8.8	7.0	17	24	7.4
22	---	---	45	53	303	135	42	18	3.5	13	11	7.3
23	---	---	213	48	203	90	40	45	300	10	29	7.3
24	---	---	398	45	141	70	37	19	500	8.0	26	6.6
25	---	---	155	42	112	59	34	13	50	7.6	14	6.2
26	---	---	86	106	99	52	32	9.3	20	6.8	11	6.7
27	---	---	246	76	103	46	29	13	50	5.6	9.4	5.9
28	---	---	3140	52	113	45	27	9.2	70	3.5	8.0	4.9
29	---	---	376	80	---	43	30	7.4	45	2.4	9.6	8.5
30	---	---	238	75	---	163	20	6.8	25	17	11	16
31	---	---	171	56	---	772	---	5.8	---	46	10	---
TOTAL	---	---	5570	6633	27270	7577	4902	479.0	3555.7	4448.9	369.0	314.7
MEAN	---	---	180	214	974	244	163	15.5	119	144	12.5	10.5
MAX	---	---	3140	1600	7000	2690	2120	45	1500	2500	29	24
MIN	---	---	16	42	48	43	20	5.8	3.5	2.4	6.2	4.9
CFSM	---	---	2.62	3.11	14.2	3.56	2.38	.22	1.73	2.09	.18	.15
IN.	---	---	3.02	3.59	14.77	4.10	2.65	.26	1.93	2.41	.21	.17

03611260 MASSAC CREEK NEAR PADUCAH, KY

LOCATION.--Lat 37°02'29", long 88°42'39", McCracken County, Hyrologic Unit 05140206, on left upstream wingwall of bridge on U.S. Highway 62, 1.2 mi upstream from Middle Fork, 6.9 mi west of post office in Paducah, and at mile 8.3.

DRAINAGE AREA.--14.6 mi^2.

PERIOD OF RECORD.--October 1971 to current year.

REVISED RECORDS.--1983 (M), 1984 (M).

GAGE.--Water-stage recorder. Datum of gage is 345.53 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 20-21, Nov. 23 to Dec. 22, Mar. 15, and June 17-28. Records fair except for periods of estimated daily discharges, which are poor. Specific conductance and water temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--18 years, 19.3 ft^3/s, 17.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,990 ft^3/s, Sept. 5, 1985, gage height, 15.86 ft, observed; minimum, 0.06 ft^3/s, Nov. 14, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 19	0815	1,570	10.92	Feb. 15	0645	2,220	12.21
Feb. 3	0415	1,570	10.92	Apr. 4	0100	1,520	10.81
Feb. 13	1645	*4,200	*14.64				

Minimum discharge, 0.40 ft^3/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	.62	4.0	24	4.0	7.3	15	1.3	3.9	2.2	64	.66
2	1.5	.65	2.5	8.4	72	6.7	10	1.2	8.1	393	2.6	.77
3	.67	.70	2.0	5.4	509	6.6	163	1.2	13	28	1.3	.62
4	.61	127	1.6	3.3	30	8.7	270	1.2	13	9.8	1.2	.61
5	.55	18	1.2	70	13	541	26	1.3	6.0	4.8	1.0	.61
6	.55	4.3	1.0	70	11	128	15	1.2	3.5	3.3	18	.60
7	.52	2.7	.90	72	8.4	38	10	1.1	3.1	2.7	1.6	.59
8	.55	2.3	.74	43	6.5	23	24	1.1	3.0	2.6	.97	.59
9	.59	2.2	.66	8.2	4.7	18	10	1.4	3.0	3.2	.91	.62
10	.59	2.7	.62	4.2	4.5	15	7.2	1.2	2.8	3.7	.74	.66
11	.59	2.2	.60	6.7	5.1	12	6.1	1.0	4.8	4.8	.72	.61
12	.59	2.0	.58	365	4.5	9.6	4.9	1.0	198	21	.70	.60
13	.59	2.0	.56	35	1780	9.4	4.1	1.0	29	16	.68	.60
14	.61	2.0	.54	175	692	9.0	4.0	19	9.2	1.5	.67	.73
15	.63	2.4	.56	38	865	7.6	4.6	8.6	7.8	1.1	.66	.67
16	.87	11	.54	17	141	6.0	3.6	1.2	6.2	1.0	.64	1.2
17	.85	2.6	.52	9.9	33	5.0	3.2	.97	3.5	.95	.72	.57
18	.66	67	.52	6.7	22	4.8	2.9	.93	2.5	.94	.65	.57
19	.56	570	.52	4.3	16	4.2	2.5	.93	7.0	.94	.64	.57
20	.68	150	1.0	3.1	111	30	2.3	.91	2.5	.94	.68	.57
21	.75	7.2	1.4	2.4	67	76	2.2	.86	1.4	.97	.70	.58
22	.69	5.4	1.0	2.2	21	17	2.2	1.7	1.0	.94	.65	.58
23	1.1	4.3	1.2	2.0	11	11	2.0	1.7	2.0	.93	.65	.57
24	.94	4.2	1.4	1.9	8.7	9.0	1.9	.92	5.0	1.8	.66	.61
25	.92	4.0	1.1	1.7	8.3	6.2	1.8	.91	2.5	1.4	.63	.65
26	.92	80	1.1	39	8.3	5.2	1.7	.95	1.6	.90	.62	.65
27	.92	100	49	8.3	9.1	4.6	1.6	.98	2.4	.86	.62	.63
28	2.7	40	255	4.2	8.6	4.3	1.5	.74	3.2	.89	.62	.61
29	.57	20	18	49	---	6.6	1.4	.73	2.7	.88	.62	.65
30	.54	10	11	13	---	38	1.4	.84	2.1	1.3	.62	.82
31	.56	---	16	6.0	---	73	---	1.2	---	.93	.62	---
TOTAL	73.37	1247.47	377.36	1098.9	4474.7	1140.8	606.1	59.27	353.8	514.27	106.09	19.37
MEAN	2.37	41.6	12.2	35.4	160	36.8	20.2	1.91	11.8	16.6	3.42	.65
MAX	50	570	255	365	1780	541	270	19	198	393	64	1.2
MIN	.52	.62	.52	1.7	4.0	4.2	1.4	.73	1.0	.86	.62	.57
CFSM	.16	2.85	.83	2.43	10.9	2.52	1.38	.13	.81	1.14	.23	.04
IN.	.19	3.18	.96	2.80	11.40	2.91	1.54	.15	.90	1.31	.27	.05

CAL YR 1988 TOTAL 5766.49 MEAN 15.8 MAX 1070 MIN .20 CFSM 1.08 IN. 14.69
WTR YR 1989 TOTAL 10071.50 MEAN 27.6 MAX 1780 MIN .52 CFSM 1.89 IN. 25.66

OHIO RIVER MAIN STEM

03611500 OHIO RIVER AT METROPOLIS, IL

LOCATION.--Lat 37°08'51", long 88°44'27", McCracken County, Hydrologic Unit 05140206, near center of span on downstream side of pier of Paducah & Illinois Railroad bridge at Metropolis, 9.5 mi downstream from Tennessee River, 37 mi upstream from mouth, and at mile 944.1.

DRAINAGE AREA.--203,000 mi^2, approximately.

PERIOD OF RECORD.--January 1928 to current year. Prior to January 1934 monthly discharge only, published in WSP 1305. Gage-height records collected 9.6 mi upstream at Paducah since 1890 are contained in reports of National Weather Service. Occasional discharge measurements 1881 to 1924 in reports of Mississippi River Commission.

GAGE.--Water-stage recorder. Datum of gage is 276.27 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 22, 1936, water-stage recorders (temporary installations) at Paducah, Ky., Metropolis and Joppa, Il., and Dam 52. Auxiliary water-stage recorder near Grand Chain, 0.5 mi upstream from Dam 53, and 18 mi downstream from base gage. Prior to May 29, 1936, auxiliary nonrecording gage at Dam 53.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 3, Dec. 7, 9, 10, 15, 18-21. Records good except those below 100,000 ft^3/s and for estimated daily discharges, which are fair. Flow regulated by many dams and reservoirs. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--61 years, 270,900 ft^3/s, 18.12 in/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780,000 ft^3/s, Feb. 1, 1937, total discharge, including overflow through Bay Creek and Cache River Valleys, 1,850,000 ft^3/s; maximum gage height, 66.60 ft, Feb. 2, 1937; minimum daily discharge, 15,000 ft^3/s, July 30, 1930.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060,000 ft^3/s, Feb. 24; maximum gage height, 52.61 ft; minimum daily discharge, 32,200 ft^3/s, Nov. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85500	38800	280000	528000	260000	973000	523000	302000	412000	499000	207000	184000
2	57800	32200	241000	495000	266000	960000	540000	349000	397000	523000	206000	193000
3	53800	58800	213000	453000	333000	926000	581000	392000	344000	596000	188000	201000
4	46100	53400	202000	411000	366000	875000	657000	435000	288000	579000	146000	190000
5	58200	66500	202000	374000	406000	822000	715000	484000	264000	545000	152000	162000
6	54900	81800	194000	362000	444000	817000	774000	448000	264000	525000	170000	155000
7	52700	82900	155000	358000	490000	815000	809000	438000	286000	507000	167000	150000
8	57000	118000	158000	377000	500000	825000	806000	442000	306000	463000	170000	155000
9	60000	140000	158000	395000	495000	844000	792000	449000	325000	438000	180000	156000
10	58100	154000	149000	431000	460000	841000	795000	456000	318000	417000	153000	169000
11	45400	137000	138000	494000	374000	834000	801000	470000	316000	375000	108000	201000
12	52600	144000	143000	557000	307000	821000	824000	489000	322000	344000	95800	166000
13	49200	150000	150000	641000	317000	824000	822000	496000	350000	345000	99000	125000
14	50600	147000	114000	710000	493000	821000	800000	503000	404000	337000	91600	172000
15	57500	137000	104000	762000	666000	800000	764000	513000	462000	317000	95900	178000
16	61000	128000	111000	814000	766000	768000	714000	514000	514000	321000	100000	187000
17	66300	134000	104000	843000	784000	708000	643000	523000	556000	293000	104000	221000
18	68700	139000	104000	829000	773000	613000	543000	531000	579000	218000	108000	250000
19	66000	175000	96900	824000	791000	518000	424000	524000	595000	193000	115000	285000
20	61000	269000	89100	806000	811000	441000	307000	503000	626000	211000	112000	315000
21	34000	352000	82900	774000	867000	405000	263000	467000	655000	229000	118000	317000
22	41600	423000	94000	741000	947000	402000	250000	460000	679000	222000	152000	279000
23	75600	448000	130000	812000	1020000	451000	246000	471000	695000	212000	179000	259000
24	77300	467000	213000	498000	1040000	481000	248000	459000	697000	230000	202000	259000
25	64100	482000	245000	330000	1020000	513000	237000	418000	686000	219000	202000	266000
26	61300	470000	330000	263000	1010000	539000	218000	392000	667000	197000	208000	295000
27	64900	473000	419000	253000	993000	557000	186000	377000	652000	195000	223000	320000
28	71700	422000	536000	248000	987000	563000	190000	370000	634000	186000	245000	327000
29	70100	363000	565000	248000	---	559000	218000	401000	601000	147000	245000	302000
30	55300	313000	581000	250000	---	556000	258000	411000	549000	187000	224000	280000
31	49400	---	563000	252000	---	554000	---	423000	---	225000	188000	---
TOTAL	1827700	6599400	6864900	16133000	17986000	21426000	15948000	13910000	14443000	10295000	4954300	6719000
MEAN	58960	220000	221400	520400	642400	691200	531600	448700	481400	332100	159800	224000
MAX	85500	482000	581000	843000	1040000	973000	824000	531000	697000	596000	245000	327000
MIN	34000	32200	82900	248000	260000	402000	186000	302000	264000	147000	91600	125000

CAL YR 1988	TOTAL 62363000	MEAN 170400	MAX 621000	MIN 20600
WTR YR 1989	TOTAL 137106300	MEAN 375600	MAX 1040000	MIN 32200

03612500 OHIO RIVER AT LOCK AND DAM 53, NEAR GRAND CHAIN, IL
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

LOCATION.--Lat 37°12'11", long 89°02'30", Pulaski County, Hydrologic Unit 05140206, at auxiliary gaging station, 0.5 mi upstream from Gar Creek, 3.0 mi southwest of Grand Chain, 18.1 mi downstream from gaging station at Metropolis, and at mile 962.2.

DRAINAGE AREA.--203,100 mi^2, approximately.

PERIOD OF RECORD.--Water years 1955 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1954 to September 1970, January 1973 to current year.
WATER TEMPERATURES: October 1954 to September 1970, January 1973 to current year.

REMARKS.--Records of daily discharge are published for station at Metropolis, IL, (station 03611500). Flow regulated by many days dams and reservoirs.

COOPERATION.--Records of specific conductance and water temperature collected by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 693 microsiemens, Nov. 25, 1968; minimum daily, 170 microsiemens, Feb. 9, 1957, Jan. 21, 1973
WATER TEMPERATURES: Maximum daily, 31.0°C, July 15, 1964, July 17-21, 25, 1977; minimum daily, 0.0°C, on several days during most winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 496 microsiemens, Dec. 10; minimum daily, 215 microsiemens, Feb. 19, 20.
WATER TEMPERATURES: Maximum daily, 26.5°C, several days in Aug. and Sept.; minimum daily 4.0°C, several days in Dec. and Jan.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 1988 11...	1040	42200	295	7.20	19.5	3.6	7.5	83	--	--	100
DEC 29...	1015	565000	323	8.16	7.0	83	12.7	106	97	270	120
FEB 1989 28...	1100	575000	205	8.65	5.0	78	12.2	97	K74	210	88
APR 12...	1030	825000	258	7.30	10.5	58	9.5	86	100	K30	110
JUN 13...	1110	340000	304	7.70	23.5	57	3.4	41	300	790	130
AUG 21...	1045	111000	265	6.78	27.0	6.5	3.1	39	150	57	110

DATE	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	ALKA-LINITY WAT DIS TOT FET FIELD MG/L AS CACO3	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SULFATE DIS-SOLVED (MG/L AS SO4)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1988 11...	39	27	8.1	19	2.6	82	67	68	20	45	0.10
DEC 29...	49	35	8.4	14	2.7	89	73	73	15	50	0.20
FEB 1989 28...	31	26	5.5	6.2	1.9	--	--	57	8.8	32	0.10
APR 12...	41	32	7.1	6.9	2.2	--	--	69	9.4	37	0.20
JUN 13...	40	36	9.0	8.6	2.4	--	--	87	11	39	0.10
AUG 21...	29	30	7.4	9.7	2.4	--	--	77	11	31	0.10

03612500 OHIO RIVER AT LOCK AND DAM 53, NEAR GRAND CHAIN, IL--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHOROUS TOTAL (MG/L AS P)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	PHOS-PHOROUS ORTHO, DIS-SOLVED (MG/L AS P)
OCT 1988											
11...	2.0	165	163	<0.010	0.420	0.110	0.090	0.40	0.050	0.050	0.040
DEC											
29...	4.8	189	181	0.020	1.50	0.150	0.160	1.1	0.080	0.070	0.040
FEB 1989											
28...	5.4	118	125	0.010	1.00	0.110	0.070	0.70	0.340	0.050	0.030
APR											
12...	5.8	151	148	0.020	1.50	0.060	0.040	0.50	0.230	0.050	0.030
JUN											
13...	4.7	159	171	<0.010	1.70	0.030	0.030	0.70	0.110	0.050	0.040
AUG											
21...	3.9	162	144	0.030	0.570	0.090	0.090	0.50	0.100	0.060	0.040

DATE	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)
OCT 1988											
11...	20	1	41	<0.5	<1	<1	<3	3	110	<5	5
DEC											
29...	30	1	37	<0.5	<1	<1	<3	2	37	<5	5
FEB 1989											
28...	--	--	--	--	--	--	--	--	--	--	--
APR											
12...	50	<1	39	<0.5	<1	2	<3	3	76	<5	6
JUN											
13...	40	<1	50	<0.5	<1	<1	<3	2	200	1	4
AUG											
21...	--	--	--	--	--	--	--	--	--	--	--

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1988											
11...	9	<10	<1	<1	<1.0	140	<6	9	7	798	78
DEC											
29...	6	<10	3	<1	<1.0	170	<6	8	200	305000	92
FEB 1989											
28...	--	--	--	--	--	--	--	--	110	171000	86
APR											
12...	6	<10	3	<1	<1.0	130	<6	4	125	278000	--
JUN											
13...	5	<10	1	<1	<1.0	160	<6	6	91	83500	84
AUG											
21...	--	--	--	--	--	--	--	--	20	5990	69

03612500 OHIO RIVER AT LOCK AND DAM 53, NEAR GRAND CHAIN, IL--Continued
(National stream-quality accounting network station)

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	374	488	333	362	262	284	352	309	320	357	374
2	328	372	370	327	370	262	268	357	310	276	365	372
3	340	358	417	333	302	273	330	327	324	299	367	382
4	326	383	483	323	304	307	333	364	312	281	270	391
5	321	406	490	331	276	275	298	277	323	285	294	384
6	321	417	487	331	282	286	299	277	333	295	341	362
7	---	427	492	335	293	282	276	343	348	280	341	321
8	---	412	483	338	295	---	264	337	358	282	384	297
9	298	472	355	342	310	---	284	280	377	308	347	---
10	290	---	496	344	296	279	290	310	396	323	369	285
11	290	472	489	336	305	287	288	304	404	280	293	325
12	293	463	490	339	325	329	293	290	391	284	293	357
13	274	462	492	342	315	339	297	304	368	299	298	354
14	---	459	488	343	221	349	270	302	340	318	298	316
15	---	466	493	356	302	346	268	285	356	318	298	311
16	283	453	304	356	242	346	309	306	380	299	301	---
17	281	458	329	355	244	283	316	313	384	298	279	313
18	296	467	320	345	227	---	313	296	378	296	271	333
19	311	487	295	338	215	342	327	---	372	299	292	334
20	344	477	325	327	215	346	336	---	383	296	334	353
21	---	469	324	323	222	350	271	289	397	364	325	336
22	---	457	327	327	220	314	267	299	392	366	332	---
23	343	442	477	305	223	337	359	302	376	300	380	---
24	330	---	486	362	217	342	355	315	344	295	390	350
25	---	---	416	320	217	319	---	317	342	295	---	355
26	---	---	421	325	221	341	---	330	335	290	---	374
27	---	---	397	300	232	340	351	333	351	288	408	344
28	342	---	325	299	262	346	279	332	---	346	377	364
29	362	---	334	346	---	---	272	329	---	356	384	391
30	385	---	339	364	---	---	364	319	---	368	409	---
31	336	---	335	352	---	---	---	333	---	366	373	---
MAX	---	---	496	364	370	---	---	---	---	368	---	---
MIN	---	---	295	299	215	---	---	---	---	276	---	---

03612500 OHIO RIVER AT LOCK AND DAM 53, NEAR GRAND CHAIN, IL--Continued
(National stream-quality accounting network station)

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.5	14.0	9.5	4.0	5.5	5.5	8.0	14.0	20.0	23.5	25.0	26.5
2	23.5	14.0	9.5	4.0	5.5	5.5	8.0	15.0	20.0	23.5	25.0	26.5
3	23.5	13.5	9.5	4.0	5.0	5.5	8.0	15.5	20.0	23.5	25.0	26.0
4	23.5	13.5	9.5	4.0	4.5	5.5	8.0	15.5	20.0	23.5	25.0	26.0
5	23.5	13.5	9.5	4.0	4.5	6.0	8.0	15.5	20.0	23.5	25.0	26.0
6	23.5	13.5	9.5	4.0	4.5	6.0	8.0	15.5	20.0	23.5	25.0	26.0
7	---	13.5	8.5	4.5	4.5	6.0	8.0	15.5	20.0	23.5	25.5	26.0
8	---	13.5	8.5	5.0	4.5	---	10.0	15.5	21.5	23.5	25.0	26.0
9	23.5	13.5	8.5	5.0	4.5	---	10.0	15.5	21.5	23.5	25.0	---
10	22.0	---	8.5	5.0	4.5	6.0	10.0	15.5	21.5	23.5	25.0	26.5
11	21.0	13.5	8.5	5.0	4.5	6.0	10.0	15.5	21.5	23.5	25.0	26.5
12	22.0	13.5	8.5	5.0	4.5	6.0	10.0	15.0	21.5	24.0	25.0	26.5
13	21.0	10.0	8.5	5.0	4.5	6.0	10.0	15.0	21.5	24.0	25.0	26.0
14	---	9.0	8.5	5.0	4.5	6.0	10.0	15.5	21.5	24.0	25.0	25.5
15	---	9.5	8.5	6.0	4.5	6.0	10.0	15.5	21.5	24.0	25.0	25.0
16	20.5	9.5	4.5	6.0	4.5	6.0	---	15.5	21.5	24.0	25.0	---
17	20.0	10.0	4.5	5.5	6.0	6.0	---	15.5	21.5	24.0	25.0	25.5
18	20.0	11.5	4.0	5.5	6.0	---	---	15.5	21.5	24.0	25.0	24.5
19	20.0	11.5	4.0	5.5	6.0	6.5	---	---	21.5	24.0	25.0	24.5
20	20.0	11.5	4.0	5.5	6.0	6.5	---	---	21.5	24.0	25.0	24.0
21	---	11.5	4.0	5.5	6.0	6.5	11.0	15.5	21.5	24.0	25.0	24.0
22	---	11.5	4.0	5.0	6.0	6.5	11.0	15.5	21.5	24.0	25.0	---
23	19.5	11.5	4.0	5.0	6.0	6.5	10.0	15.5	21.5	24.0	25.5	---
24	20.0	---	4.0	5.0	6.0	6.5	10.0	15.5	21.5	24.0	25.5	23.5
25	---	9.5	4.0	5.0	6.0	6.5	---	15.5	---	24.0	---	23.5
26	---	9.5	4.0	5.5	6.0	8.0	---	18.5	---	24.0	---	23.5
27	---	9.5	4.0	5.5	6.0	8.0	13.5	18.5	---	25.0	26.0	22.5
28	14.0	9.5	4.0	5.5	6.0	8.0	13.5	18.5	---	---	26.0	22.5
29	14.0	9.5	4.0	5.5	---	---	13.5	19.5	---	---	26.5	22.5
30	14.0	---	4.0	5.5	---	8.0	13.5	19.5	26.5	---	26.5	22.5
31	14.0	---	4.0	5.5	---	8.0	---	20.0	---	---	26.5	---
MAX	---	---	9.5	6.0	6.0	---	---	---	---	---	---	---
MIN	---	---	4.0	4.0	4.5	---	---	---	---	---	---	---

07024000 BAYOU DE CHIEN NEAR CLINTON, KY

LOCATION.--Lat 36°37'43", long 88°57'50", Hickman County, Hydrologic Unit 08010201, on right bank at downstream side of bridge on U.S. highway 51, 1.1 mi upstream from Cane Creek, 3.2 mi southeast of Clinton, and at mile 15.1.

DRAINAGE AREA.--68.7 mi^2.

PERIOD OF RECORD.--October 1939 to September 1950 (monthly discharge only for some periods, published in WSP 1311), October 1950 to September 1978, September 1984 to current year. Published as "Bayou du Chien near Clinton," October 1954 to September 1968.

REVISED RECORDS.--WSP 1311: 1940 (M), 1942-44 (M). WSP 1711: Drainage area.

GAGE.--Water-Stage recorder. Datum of gage is 307.71 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1951, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 19-21, Jan. 2-4, 21-25, Feb. 24 to Mar. 14, Mar. 29 to Apr. 16, Apr. 29 to May 13, June 4-29, July 4 to Aug. 15. Records fair except those for periods of estimated daily discharge which are poor. Specific conductance and temperature measurements made in conjunction with discharge measurements are published in the miscellaneous water-quality data section.

AVERAGE DISCHARGE.--44 years (Water years 1940-78, 85-89), 106 ft^3/s, 20.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,460 ft^3/s, Jan. 2. 1966, from rating curve extended above 4,000 ft^3/s; maximum gage height, 16.22 ft, Mar. 12, 1965; minimum daily discharge, 4 ft^3/s, May 29, 1943 (affected by backwater from Mississippi River).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	0100	4,050	16.02	Mar. 5	Unknown	e2,500	Unknown
Dec. 29	0300	2,650	15.17	Apr. 4	Unknown	e2,500	Unknown
Feb. 4	0330	2,970	15.37	June 12	Unknown	e2,000	Unknown
Feb. 14	1830	*4,170	*16.07				

e Estimated

Minimum daily discharge, 14 ft^3/s, several days in August.

REVISIONS.--The peak discharges and annual maximum (*) reported for water years 1985-88 have been revised as shown in the following table. They supersede figures published in the reports for 1985-88:

Water Year	Date	Discharge (ft^3/s)	Gage height (ft)
1985	Oct. 8, 1984	*3,110	*15.45
1985	Dec. 22, 1984	2,320	14.95
1986	Feb. 4, 1986	*1,700	*14.50
1987	Dec. 10, 1986	*2,890	*15.32
1988	Dec. 26, 1987	2,170	14.85
1988	Jan. 20, 1988	*2,890	*15.32

07024000 BAYOU DE CHIEN NEAR CLINTON, KY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	18	30	53	18	210	300	27	15	25	20	18
2	87	18	24	36	130	190	140	25	128	872	19	23
3	28	18	23	25	1500	180	350	26	25	1340	18	17
4	20	376	22	26	1970	170	2000	26	30	700	17	16
5	17	685	20	120	156	2000	500	27	45	300	16	15
6	16	88	19	198	70	1500	350	28	28	170	16	15
7	16	44	21	166	57	400	320	26	22	120	15	15
8	16	34	19	504	53	250	350	24	20	84	15	15
9	16	29	17	44	48	200	200	26	19	60	15	16
10	17	229	18	21	47	150	140	25	18	45	14	17
11	16	51	17	71	52	130	110	24	18	40	14	16
12	17	36	16	967	54	100	90	23	1500	80	14	16
13	16	36	16	1200	847	88	78	22	600	250	14	16
14	17	32	18	761	3550	62	68	21	350	180	14	20
15	18	30	16	1040	3810	62	60	20	430	110	14	20
16	19	175	15	142	2950	57	52	19	150	54	14	17
17	18	46	15	53	685	55	45	19	100	44	14	17
18	17	321	15	34	133	63	41	18	120	35	14	16
19	16	2440	15	23	100	59	38	23	350	100	14	16
20	16	3140	15	19	490	207	35	22	170	45	15	16
21	17	1330	15	18	1150	457	33	19	70	30	17	16
22	17	210	15	17	346	101	30	24	54	25	15	16
23	28	76	125	16	97	68	28	32	260	23	14	16
24	32	59	159	15	62	56	26	20	180	21	15	16
25	22	51	31	15	70	50	24	18	90	19	19	16
26	20	655	16	119	86	44	22	19	48	18	16	16
27	23	908	147	45	130	43	20	37	54	18	14	16
28	65	190	1480	21	150	42	23	18	62	17	14	16
29	25	62	1710	79	---	180	40	16	56	17	19	17
30	19	41	136	41	---	250	33	15	25	16	71	20
31	18	---	51	22	---	600	---	15	---	23	24	---
TOTAL	1135	11428	4256	5911	18811	8024	5546	704	5037	4881	544	502
MEAN	36.6	381	137	191	672	259	185	22.7	168	157	17.5	16.7
MAX	446	3140	1710	1200	3810	2000	2000	37	1500	1340	71	23
MIN	16	18	15	15	18	42	20	15	15	16	14	15
CFSM	.53	5.54	2.00	2.78	9.78	3.77	2.69	.33	2.44	2.29	.26	.24
IN.	.61	6.19	2.30	3.20	10.19	4.34	3.00	.38	2.73	2.64	.29	.27

CAL YR 1988 TOTAL 33641 MEAN 91.9 MAX 3140 MIN 11 CFSM 1.34 IN. 18.22
WTR YR 1989 TOTAL 66779 MEAN 183 MAX 3810 MIN 14 CFSM 2.66 IN. 36.16

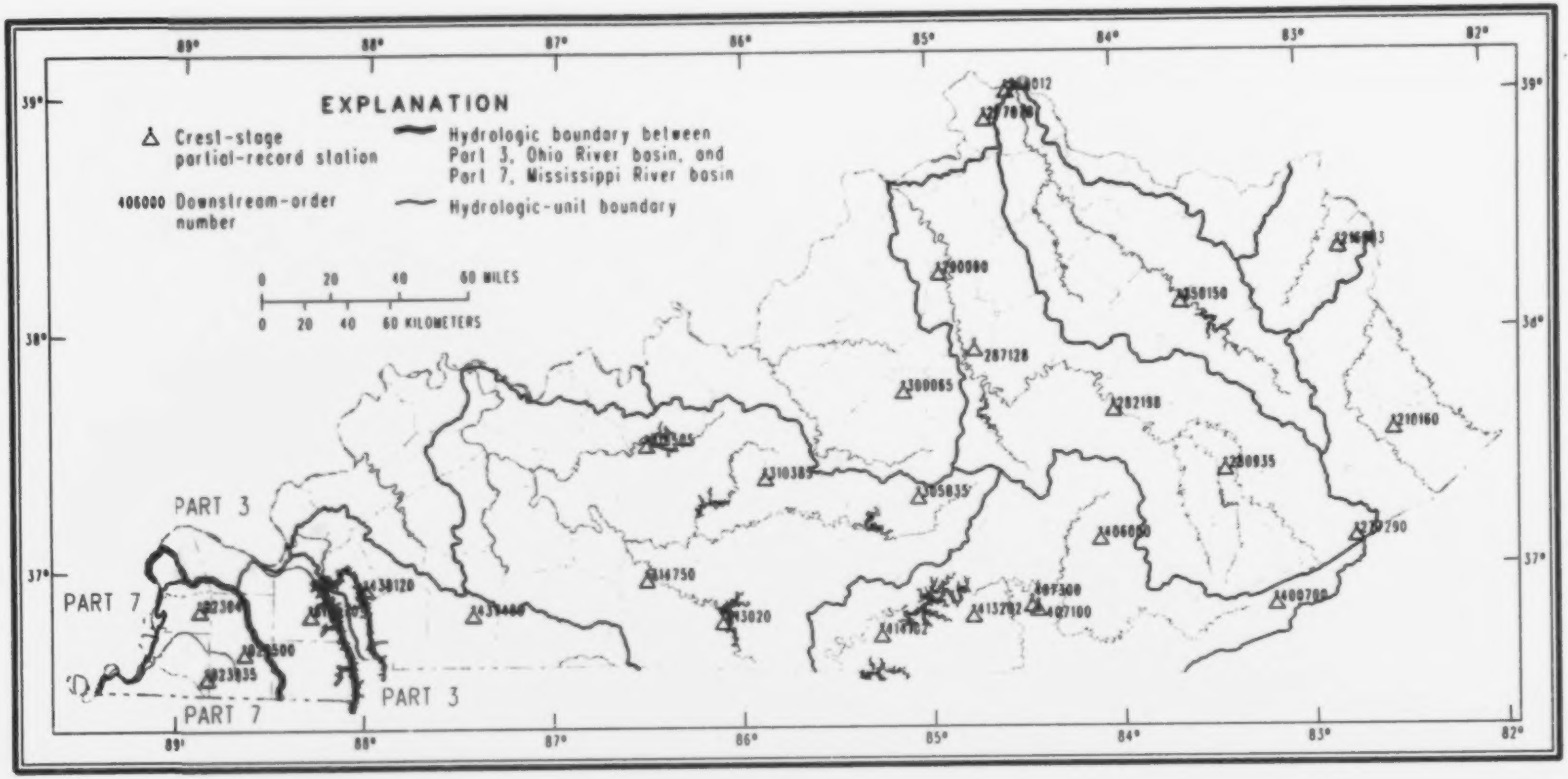

89°
88°
87°
86°
85°
84°
83°
82°
39°
38°
37°
EXPLANATION
Crest-stage partial-record station
406000 Downstream-order number
Hydrologic boundary between Part 3, Ohio River basin, and Part 7, Mississippi River basin
Hydrologic-unit boundary
0 20 40 60 MILES
0 20 40 60 KILOMETERS
PART 3
PART 7
PART 3
PART 7
287128
300065
282198
210160
310385
305835
406000
400700
407300
407100
413202
314750
438120
023035
250150

Figure 8.--Location of crest-stage partial-record stations in Kentucky.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. At a few of these stations crest stages are determined from continuous water-stage recorder graphs. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record station

Station number	Station name	Location	Drainage area (mi^2)	Period of Record	Date	Annual Maximum Gage height (feet)	Annual Maximum Dis-charge (ft^3/s)
		BIG SANDY RIVER BASIN					
03210160	Caney Fork near Gulnare, Ky.	Lat 37°35'11", long 82°32'23", Pike County, on right bank, adjacent to State Highway 2061, 0.3 mi downstream from Cranesnest Branch, 2.9 mi south of Gulnare, and at mile 1.1.	3.74	1975†, 1977-89	b	b	b
		LITTLE SANDY RIVER BASIN					
03216563	Mile Branch near Rush, Ky.	Lat 38°21'50", long 82°47'45", Carter County, at culvert on Interstate Highway 64, 2.1 mi northwest of rush, and at mile 1.3.	.94	1976-89	b	b	b
		LICKING RIVER BASIN					
03250150	Indian Creek near Owingsville, Ky.	Lat 38°09'24", long 83°39'05", Bath County, at culvert on Interstate Highway 64, 1.3 mi above Knox Hill Branch, 6.2 mi east of Owingsville, and at mile 1.5.	2.43	1975-89	02-15-89	70.31	930
		PLEASANT RUN CREEK BASIN					
03260012	Pleasant Run Creek Tributary at Fort Mitchell, Ky.	Lat 39°03'45", long 84°33'45", Kenton County, at culvert on private road, about 1.2 mi east of the village of Crescent Springs, and at mile 0.2.	1.62	1973-89	06-20-89	2.55	152
		GUNPOWDER CREEK BASIN					
032770/0	Fowlers Fork at Union, Ky.	Lat 38°56'43", long 84°40'54", Boone County, at culvert on State Highway 536, at Union 50 ft upstream from unnamed tributary, and at mile 2.7.	1.54	1976-89	04-04-89	7.02	363
		KENTUCKY RIVER BASIN					
03277290	Bottom Fork near Mayking, Ky.	Lat 37°08'24", long 82°45'31", Letcher County, at culvert on U.S. Highway 1195, 0.6 mi northeast of Mayking, and at mile 0.6.	3.03	1976-87 1989	04-26-89	11.31	1,430
03280935	Stamper Fork at Canoe, Ky.	Lat 37°26'24", long 83°26'17", Breathitt County, at culvert on county road, 0.9 mi southeast of Canoe, and at mile 0.04.	1.57	1975-87 1989	03-07-89	86.53	141

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record station

						Annual Maximum	
Station number	Station name	Location	Drainage area (mi^2)	Period of Record	Date	Gage height (feet)	Discharge (ft^3/s)
		KENTUCKY RIVER BASIN--Continued					
03282198	Clear Creek Tributary near West Irvine, Ky.	Lat 37°42'19", long 84°01'26", Estill County, at culvert on State Highway 52, 1.3 mi west of West Irvine, and at mile 0.3.	.59	1975-89	04-21-89	99.49	195
03287128	Tanners Creek at Mortonsville, Ky.	Lat 37°58'23", long 84°45'29", Woodford County, at culvert on State Highway 1965 at Mortonsville, 3.7 mi southwest of Versailles, and at mile 2.8.	1.49	1976-88 1989	12-26-87 03-05-89	3.63 3.80	205 225
03290000	Flat Creek near Frankfort, Ky.	Lat 38°17'53", long 84°56'32", Franklin County, on left bank at downstream side of bridge on U.S. Highway 421, 0.4 mi downstream from confluence of Goose Creek and Bald Knob Branch, 7.0 mi northwest of Frankfort, and at mile 9.8.	5.63	1951-71†, 1972-89	12-28-88	6.41	1,100
		SALT RIVER BASIN					
03300065	North Prong, Willisburg, Ky.	Lat 37°47'54", long 85°08'32", Washington County, at culvert on State Highway 53, 1.2 mi southwest of the junction of State Highways 53 and 433 in Willisburg, and at mile 2.3.	1.71	1975-89	b	b	b
		GREEN RIVER BASIN					
03305835	Gum Lick Creek Tributary near Clementsville, Ky.	Lat 37°21'03", long 85°04'17", Casey County, at culvert on county road, 4.5 mi north of Clementsville, and at mile 0.1.	.71	1976-89	02-20-89	4.91	157
03310385	Bacon Creek Tributary near Upton, Ky.	Lat 37°26'15", long 85°53'01", Hart County, culvert on Interstate Highway 65, 0.2 mi south of Larue and Hart county line, and 2.0 mi south of Upton.	.56	1975-89	08-25-89	14.15	84
03313020	Solomon Creek Tributary near Scottsville, Ky.	Lat 36°49'52", long 86°06'43", Allen County, at culvert on U.S. Highway 31E, 6.9 mi northeast of Scottsville, and at mile 0.9.	.24	1976-89	09-14-89	9.79	185
03314750	Barren River Tributary near Bowling Green, Ky.	Lat 37°00'38", long 86°30'43", Warren County, at culvert on Green River Parkway, 0.3 mi upstream from unnamed tributary, 4.0 mi northwest of Bowling Green, and at mile 2.3.	.50	1976-89	02-14-89	9.35	312
03318505	Pleasant Run Tributary near Falls of Rough, Ky.	Lat 37°34'49", long 86°30'49", Grayson County, at culvert on State Highway 79, 2.2 mi east of Falls of Rough, and at mile 0.4.	.22	1975-89	11-29-88	19.65	260

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record station

Station number	Station name	Location	Drainage area (mi^2)	Period of Record	Date	Annual Maximum	
						Gage height (feet)	Discharge (ft^3/s)
		CUMBERLAND RIVER BASIN					
03400700	Clover Fork at Everts, Ky.	Lat 36°51'58", long 83°11'37", Harlan County, at bridge on State Highway 215, at Everts just below Yocum Creek, and at mile 10.6.	82.4	1959-87 1989	01-12-89	11.59	12,910
03406000	Wood Creek near London, Ky.	Lat 37°09'40", long 84°06'43", Laurel County, on left bank, 50 ft downstream from bridge on U.S. Highway 25, 0.2 mi upstream from Peacock Branch, 2.8 mi northwest of London, and at mile 12.9.	3.89	1953-71†, 1972-87 1989	03-06-89	4.76	274
03407100	Cane Branch near Parkers Lake, Ky.	Lat 36°52'05", long 84°26'57", McCreary County, on left bank, 2,100 ft upstream from West Fork, 2.5 mi northeast of Parkers Lake, 2.6 mi east of Greenwood, and at mile 0.9.	.67	1956-66†, 1967-72, 1973-74†, 1975-87 1989	03-05-89	1.63	115
03407300	Helton Branch at Greenwood, Ky.	Lat 36°53'07", long 84°28'55", McCreary County, on left bank, 1.0 mi northeast of Greenwood, and at mile 0.1.	.85	1956-74†, 1975-87 1989	03-05-89	1.46	103
03413202	Elk Spring Creek near Spann, Ky.	Lat 36°50'53", long 85°47'24", Wayne County, at culvert on State Highway 1275, 1.1 mi west of Spann, 3.5 mi northeast of Monticello, and at mile 7.1.	.57	1976-87 1989	03-05-89	<4.00	<50
03414102	Bear Creek near Burkesville, Ky.	Lat 36°46'14", long 85°16'30", Cumberland County, at culvert on State Highway 90, just downstream from unnamed tributary, 5.3 mi east of Burkesville, and at mile 6.1.	3.52	1976-87 1989	03-05-89	8.03	279
03437490	South Fork Little River Tributary near Hopkinsville, Ky.	Lat 36°51'30", long 87°25'41", Christian County, at culvert on U.S. Highway 68, 2.6 mi east of Hopkinsville, and at mile 0.8.	2.62	1977-87, 1989	07-02-89	18.50	460
03438120	North Fork Dryden Creek Tributary near Confederate, Ky.	Lat 36°57'38", long 87°59'53", Lyon County, at culvert on State Highway 274, 2.2 mi south of Confederate, and at mile 0.2.	.10	1975-89	02-14-89	6.91	58
		TENNESSEE RIVER BASIN					
03610470	York Creek near Benton, Ky.	Lat 36°50'51", long 88°17'15", Marshall County, at culvert on State Highway 1897, 1.3 mi upstream from Elizabeth Creek, 3.6 mi east of Benton, and at mile 1.4.	.96	1975-89	11-20-88	18.04	510

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record station

Station number	Station name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum Date	 Gage height (feet)	 Discharge (ft^3/s)
		MAYFIELD CREEK BASIN					
07022500	Perry Creek near Mayfield, Ky.	Lat 36°40'45", long 88°37'57", Graves County, on right bank, 30 ft upstream from bridge on State Highway 303, 3.5 mi south of city limits of Mayfield, and at mile 2.0	1.72	1952-65†, 1967-72‡, 1973-89	b	6.54	650
07023040	Lick Creek Tributary near Kirbyton, Ky.	Lat 36°51'31", long 88°52'19", Carlisle County, at culvert on county road, 0.2 mi upstream from unnamed tributary, 1.3 mi northwest of Kirbyton, and at mile 1.6.	.53	1975-89	02-14-89	16.12	250
		BAYOU DE CHIEN BASIN					
07023935	South Fork Bayou de Chien Tributary at Water Valley, Ky.	Lat 36°34'18", long 88°49'40", Hickman County, at culvert on Purchase Parkway, 0.5 mi northeast of county road 1529 bridge crossing Parkway, 1.0 mi northwest of Water Valley, and at mile 1.2.	.23	1975-89	02-14-89	17.37	135

* Revised.
† operated as a continuous-record gaging station.
†† Gage heights only.
a Stage-discharge relation not determined. Discharge to be published at a later date.
b Unknown.
c Levels of high-water mark.

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW INSTAN TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)
KENTUCKY RIVER BASIN							
03282088 FURNACE FORK AT FITCHBURG, KY (LAT 37 44 08N LONG 083 51 00W)							
OCT 1988 18...	1015	0.40	2210	7.55	13.5	510	3.5
NOV 15...	1155	3.7	725	7.80	9.0	87	0.53
DEC 14...	0958	0.82	855	7.53	1.5	--	--
JAN 1989 25...	1030	0.88	540	8.13	6.5	--	--
MAR 02...	1150	1.7	447	7.96	6.0	23	0.14
03282090 NEEDMORE HOLLOW CREEK AT FITCHBURG, KY (LAT 37 44 09N LONG 083 51 03W)							
OCT 1988 18...	0957	0.09	3600	7.11	14.5	960	6.9
NOV 15...	1130	0.37	900	7.40	8.5	150	0.93
DEC 14...	0936	0.24	865	7.22	2.0	--	--
JAN 1989 25...	1015	0.65	545	7.84	6.5	--	--
MAR 02...	1120	1.2	529	7.38	5.5	53	0.36
03282092 UNNAMED TRIBUTARY AT FITCHBURG, KY (LAT 37 43 56N LONG 083 50 58W)							
OCT 1988 18...	1035	0.08	765	7.62	13.5	94	0.49
NOV 15...	1240	0.43	440	7.60	10.5	32	0.21
DEC 14...	1020	0.23	425	7.57	2.0	--	--
JAN 1989 25...	1100	0.50	325	7.73	7.5	--	--
MAR 02...	1230	1.1	263	7.32	8.5	9.6	<0.010
03282094 CROWE HOLLOW CREEK NEAR FITCHBURG, KY (LAT 37 42 53N LONG 083 51 27W)							
OCT 1988 18...	1054	0.05	415	7.43	14.0	12	0.013
NOV 15...	1300	0.36	350	7.50	11.5	8.8	<0.010
DEC 14...	1050	0.14	370	7.56	2.5	--	--
JAN 1989 25...	1130	0.43	320	7.77	9.0	--	--
MAR 02...	1315	1.1	303	7.46	9.5	5.6	<0.010

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENTUCKY RIVER BASIN

03282096 STEWART HOLLOW CREEK NEAR FITCHBURG, KY (LAT 37 42 28N LONG 083 51 33W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT³/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)
OCT 1988							
18...	1100	0.05	470	7.34	15.0	14	0.014
NOV							
15...	1320	0.56	385	7.50	13.0	10	0.012
DEC							
14...	1115	0.15	395	7.44	3.0	--	--
JAN 1989							
25...	1145	0.45	335	7.85	9.0	--	--
MAR							
02...	1330	1.1	308	7.59	9.5	6.7	<0.010

03282098 SHULER HOLLOW CREEK NEAR FITCHBURG, KY (LAT 37 42 21N LONG 083 51 23W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT³/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	BROMIDE DIS-SOLVED (MG/L AS BR)
OCT 1988							
18...	1115	0.10	365	7.42	14.5	6.5	0.012
NOV							
15...	1345	0.41	310	7.40	11.5	4.4	0.015
DEC							
14...	1128	0.20	315	7.42	3.0	--	--
JAN 1989							
25...	1200	0.96	280	7.80	8.0	--	--
MAR							
02...	1345	1.4	250	7.61	8.0	2.1	<0.010

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPER- ATURE WATER (DEG C)	TEMPER- ATURE AIR (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	OIL AND GREASE, TOTAL IN BOT- TOM MA- TERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDO- SULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	P,P' DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
KENTUCKY RIVER BASIN--Continued												
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)												
NOV 1988 14...	1610	10.5	20.5	540	9.05	740	37	<0.50	<2.5	3.8	<2.5	<2.5
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)												
NOV 1988 14...	1810	9.5	16.0	890	8.43	190	11	<0.10	<0.1	<0.1	<0.1	<0.1
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)												
NOV 1988 14...	1530	10.0	21.5	315	7.11	930	33	3.8	<2.5	8.8	<2.5	22
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)												
NOV 1988 15...	1150	9.5	--	3430	7.80	350	6.0	3.0	<0.1	<0.1	<0.1	1.9
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)												
NOV 1988 15...	1610	12.0	21.5	460	8.32	1100	34	<0.50	<2.5	<2.5	<2.5	<2.5
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)												
NOV 1988 15...	1600	13.0	21.0	711	9.13	530	15	<2.5	<2.5	<2.5	<2.5	<2.5
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)												
NOV 1988 16...	0900	14.5	20.0	652	7.99	3400	14	<2.5	<2.5	<2.5	<2.5	<2.5
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)												
NOV 1988 16...	1045	16.0	19.0	901	7.95	1100	24	<2.5	<2.5	<2.5	<2.5	<2.5
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)												
NOV 1988 16...	1310	15.5	17.0	1020	8.94	630	20	<2.5	<2.5	<2.5	<2.5	<2.5
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)												
NOV 1988 16...	1340	15.0	16.5	723	8.47	660	43	<2.5	<2.5	<2.5	<2.5	<2.5
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 46W)												
NOV 1988 15...	1740	11.0	19.5	530	7.88	990	68	<2.5	<2.5	<2.5	<2.5	<2.5
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)												
NOV 1988 16...	1345	16.0	17.5	820	7.96	730	24	<2.5	<2.5	<2.5	<2.5	<2.5
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)												
NOV 1988 16...	0840	15.5	11.5	970	7.68	3700	25	<2.5	<2.5	<2.5	27	<2.5

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued												
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)												
NOV 1988 14...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)												
NOV 1988 14...	<0.1	<0.1	<0.1	<0.1	<5.0	<0.1	1.1	<1.0	<1.0	<1.0	<1.0	<1.0
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)												
NOV 1988 14...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)												
NOV 1988 15...	<0.1	<0.1	<0.1	<0.1	<5.0	<0.1	<0.1	<1.0	<1.0	<1.0	<1.0	<1.0
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)												
NOV 1988 15...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)												
NOV 1988 15...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	9.5	<25	<25	<25.0	<25.0	<25.0
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)												
NOV 1988 16...	<2.5	110	<2.5	<2.5	<100	<2.5	42	<25	<25	<25.0	<25.0	<25.0
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)												
NOV 1988 16...	<2.5	85	<2.5	<2.5	<100	<2.5	15	<25	<25	<25.0	<25.0	<25.0
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)												
NOV 1988 16...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)												
NOV 1988 16...	<2.5	97	17	<2.5	<100	12	15	<25	<25	<25.0	<25.0	<25.0
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)												
NOV 1988 15...	<2.5	270	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)												
NOV 1988 16...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	18	<25	<25	<25.0	<25.0	<25.0
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)												
NOV 1988 16...	<2.5	130	<2.5	<2.5	<100	<2.5	<2.5	<25	<25	<25.0	<25.0	<25.0

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACE-NAPHTH-YLENE BOT.MAT (UG/KG)	ACE-NAPHTH-ENE BOT.MAT (UG/KG)	ANTHRA-CENE BOT.MAT (UG/KG)	BENZO B FLUOR-AN-THENE BOT.MAT (UG/KG)	BENZO K FLUOR-AN-THENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLORO-ETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLORO-ETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLORO-ISO-PROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHAL-ATE BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued												
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)												
NOV 1988 14...	<25.0	<25.0	<250	<250	<250	1600	<500	<500	<250	<250	<250	<250
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)												
NOV 1988 14...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)												
NOV 1988 14...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)												
NOV 1988 15...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)												
NOV 1988 15...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	3100
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)												
NOV 1988 15...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)												
NOV 1988 16...	130	<25.0	<250	960	1700	31000	<500	27000	<250	<250	<250	280
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)												
NOV 1988 16...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	310
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)												
NOV 1988 16...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)												
NOV 1988 16...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)												
NOV 1988 15...	<25.0	<25.0	<250	<250	<250	890	<500	<250	<250	<250	<250	<250
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)												
NOV 1988 16...	<25.0	<25.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	1300
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)												
NOV 1988 16...	148	<25.0	<250	<250	470	3100	<500	2000	<250	<250	<250	<250

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENTUCKY RIVER BASIN--Continued

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)												
NOV 1988												
14...	<500	<250	<250	1700	<250	<250	<250	<500	<250	<250	<250	1200
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)												
NOV 1988												
14...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)												
NOV 1988												
14...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	2100
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)												
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)												
NOV 1988												
15...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)												
NOV 1988												
15...	<500	<250	<250	350	<250	<250	<250	<500	<250	<250	<250	<250
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)												
NOV 1988												
16...	6500	<250	<250	4900	1100	<250	<250	18000	<250	<250	<250	470
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)												
NOV 1988												
16...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)												
NOV 1988												
16...	510	<250	<250	660	<250	<250	<250	<500	<250	<250	<250	<250
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)												
NOV 1988												
16...	<500	<250	<250	280	<250	<250	<250	<500	<250	<250	<250	<250
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)												
NOV 1988												
15...	600	<250	<250	530	<250	<250	<250	<250	<250	<250	<250	<250
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)												
NOV 1988												
16...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)												
NOV 1988												
16...	2200	<250	<250	2100	<250	<250	<250	1900	<250	<250	<250	<250

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENTUCKY RIVER BASIN--Continued

DATE	NITRO-BENZENE BOT.MAT (UG/KG)	PARA-CHLORO-META CRESOL BOT.MAT (UG/KG)	PHENAN-THRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DI-CHLORO-BENZENE BOT.MAT (UG/KG)	1,2,4-TRI-CHLORO-BENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DI-CHLORO-BENZENE BOT.MAT (UG/KG)	1,4-DI-CHLORO-BENZENE BOT.MAT (UG/KG)
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)											
NOV 1988 14...	<250	<1500	1700	1400	<500	430	<250	<250	<500	<250	<250
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)											
NOV 1988 14...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)											
NOV 1988 14...	<250	<1500	1100	<250	<500	<250	<250	<250	<500	<250	<250
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)											
NOV 1988 15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)											
NOV 1988 15...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)											
NOV 1988 15...	<250	<1500	<250	340	<500	<250	<250	<250	<500	<250	<250
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)											
NOV 1988 16...	<250	<1500	7900	40000	19000	5300	<250	<250	8400	<250	<250
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)											
NOV 1988 16...	<250	<1500	<250	42000	<500	<250	<250	<250	<500	<250	<250
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)											
NOV 1988 16...	<250	<1500	290	680	<500	380	<250	<250	<500	<250	<250
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)											
NOV 1988 16...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)											
NOV 1988 15...	<250	<1500	330	490	<500	270	<250	<250	<500	<250	<250
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)											
NOV 1988 16...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)											
NOV 1988 16...	<250	<1500	1900	1800	2200	1400	<250	<250	<500	<250	<250

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	2-CHLORO-NAPH-THALENE BOT.MAT (UG/KG)	2-CHLORO-PHENOL BOT.MAT (UG/KG)	2-NITRO-PHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHAL-ATE BOT.MAT (UG/KG)	2,4-DI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	2,4-DI-NITRO-PHENOL BOT.MAT (UG/KG)	2,4,6-TRI-CHLORO-PHENOL BOT.MAT (UG/KG)	2,6-DI-NITRO-TOLUENE BOT.MAT (UG/KG)	3,3'-DI-CHLORO-BENZI-DINE BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued											
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)											
NOV 1988 14...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)											
NOV 1988 14...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)											
NOV 1988 14...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)											
NOV 1988 15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)											
NOV 1988 15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)											
NOV 1988 15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)											
NOV 1988 15...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)											
NOV 1988 16...	<250	<250	<250	680	<250	<250	<250	<1000	<1000	<250	<1200
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	BENZI-DINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued											
03277340 NORTH FORK KENTUCKY RIVER AT BLACKEY, KY (LAT 37 07 43N LONG 082 58 27W)											
NOV 1988 14...	<250	<250	<1500	<1500	<250	<1500	2500	<250	<2500	<250	<250
03277515 LOTTS CREEK NEAR DARFORK, KY (LAT 37 17 01N LONG 083 11 15W)											
NOV 1988 14...	<250	<250	<1500	<1500	<250	<1500	4100	<250	<2500	<250	<250
03281097 HORSE CREEK NEAR HIMA, KY (LAT 37 07 13N LONG 083 46 46W)											
NOV 1988 14...	<250	<250	<1500	<1500	<250	<1500	8500	<250	<2500	<250	<250
374100083425900 BIG SINKING CREEK NEAR FIXER, KY (LAT 37 41 00N LONG 083 42 59W)											
NOV 1988 15...	<250	<250	<1500	<1500	<250	<1500	1800	<250	<2500	<250	<250
03283820 MUDDY CREEK AT ELLISTON, KY (LAT 37 44 27N LONG 084 09 22W)											
NOV 1988 15...	<250	<250	<1500	<1500	<250	<1500	23000	<250	<2500	<250	<250
03283990 OTTER CREEK AT REDHOUSE, KY (LAT 37 49 47N LONG 084 16 22W)											
NOV 1988 15...	<250	<250	<1500	<1500	<250	<1500	510	<250	<2500	<250	<250
03284560 HICKMAN CREEK NEAR MILLS, KY (LAT 37 53 32N LONG 084 30 53W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	2600	<250	<2500	<250	<250
03284630 TOWN FORK NEAR NICHOLASVILLE, KY (LAT 37 50 49N LONG 084 35 12W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	3200	<250	<2500	<250	<250
03285200 CLARKS RUN NEAR DANVILLE, KY (LAT 37 38 20N LONG 084 43 16W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	450	<250	<2500	<250	<250
03287300 GLENNS CREEK NEAR VERSAILLES, KY (LAT 38 05 48N LONG 084 48 02W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	1600	<250	<2500	<250	<250
03287600 NORTH ELKHORN CREEK AT BRYAN STATION ROAD AT MONTROSE, KY (LAT 38 04 35N LONG 084 24 48W)											
NOV 1988 15...	<250	<250	<1500	<1500	<250	<1500	2100	<250	<2500	<250	<250
03288150 NORTH ELKHORN CREEK AT GREAT CROSSING, KY (LAT 38 12 56N LONG 084 36 21W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	670	<250	<2500	<250	<250
380338084315100 TOWN BRANCH AT LEXINGTON, KY (LAT 38 03 38N LONG 084 31 51W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	1600	<250	<2500	<250	<250

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	TEMPERATURE WATER (DEG C)	TEMPERATURE AIR (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	OIL AND GREASE, TOTAL IN BOTTOM MATERIAL (MG/KG)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (GM/KG AS C)	ENDOSULFAN ALPHA BOT.MAT (UG/KG)	ALPHA BHC TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	P,P' DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
KENTUCKY RIVER BASIN--Continued												
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)												
NOV 1988 16...	0935	17.5	21.0	930	7.18	3600	55	<2.5	<2.5	<2.5	56	<2.5
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)												
NOV 1988 16...	1105	15.5	12.0	680	8.03	1600	15	<2.5	<2.5	<2.5	<2.5	<2.5
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)												
NOV 1988 16...	1600	14.0	16.5	400	7.07	190	14	1.9	<0.1	<0.1	2.7	3.5

DATE	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	AROCLOR 1221 IN BOTTOM MAT. (UG/KG)	AROCLOR 1232 IN BOTTOM MAT. (UG/KG)	AROCLOR 1242 PCB BOT.MAT (UG/KG)	AROCLOR 1248 PCB BOT.MAT (UG/KG)	AROCLOR 1254 PCB BOT.MAT (UG/KG)
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)												
NOV 1988 16...	<2.5	170	<2.5	94	<100	64	52	<25	<25	<25.0	<25.0	<25.0
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)												
NOV 1988 16...	<2.5	<0.25	<2.5	<2.5	<100	<2.5	27	<25.5	<25	<25.0	<25.0	<25.0
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)												
NOV 1988 16...	<0.1	<0.1	<0.1	<0.1	<5.0	3.2	<0.1	<1.0	<1.0	57.8	<1.0	<1.0

DATE	AROCLOR 1260 PCB BOT.MAT (UG/KG)	AROCLOR 1016 PCB BOT.MAT (UG/KG)	ACENAPHTHYLENE BOT.MAT (UG/KG)	ACENAPHTHENE BOT.MAT (UG/KG)	ANTHRACENE BOT.MAT (UG/KG)	BENZO B FLUORANTHENE BOT.MAT (UG/KG)	BENZO K FLUORANTHENE BOT.MAT (UG/KG)	BENZO-A-PYRENE BOT.MAT (UG/KG)	BIS (2-CHLOROETHYL) ETHER BOT.MAT (UG/KG)	BIS (2-CHLOROETHOXY) METHANE BOT.MAT (UG/KG)	BIS (2-CHLOROISOPROPYL) ETHER BOT.MAT (UG/KG)	N-BUTYL BENZYL PHTHALATE BOT.MAT (UG/KG)
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)												
NOV 1988 16...	<25.0	<25.0	<250	660	1500	21000	<500	17000	<250	<250	<250	430
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)												
NOV 1988 16...	<25.0	<25.0	<250	<250	510	2500	<500	1400	<250	<250	<250	430
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)												
NOV 1988 16...	<1.0	<1.0	<250	<250	<250	<500	<500	<500	<250	<250	<250	<250

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	CHRYSENE BOT.MAT (UG/KG)	DIETHYL PHTHALATE BOT.MAT (UG/KG)	DIMETHYL PHTHALATE BOT.MAT (UG/KG)	FLUORANTHENE BOT.MAT (UG/KG)	FLUORENE BOT.MAT (UG/KG)	HEXACHLOROCYCLOPENTADIENE BOT.MAT (UG/KG)	HEXACHLOROETHANE BOT.MAT (UG/KG)	INDENO (1,2,3-CD) PYRENE BOT.MAT (UG/KG)	ISOPHORONE BOT.MAT (UG/KG)	N-NITROSODI-N-PROPYLAMINE BOT.MAT (UG/KG)	N-NITROSODIPHENYLAMINE BOT.MAT (UG/KG)	NAPHTHALENE BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued												
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)												
NOV 1988 16...	5500	<250	<250	4700	860	<250	<250	12000	<250	<250	<250	320
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)												
NOV 1988 16...	2200	<250	<250	2800	<250	<250	<250	1100	<250	<250	<250	<250
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)												
NOV 1988 16...	<500	<250	<250	<250	<250	<250	<250	<500	<250	<250	<250	<250

DATE	NITROBENZENE BOT.MAT (UG/KG)	PARACHLOROMETA CRESOL BOT.MAT (UG/KG)	PHENANTHRENE BOT.MAT (UG/KG)	PYRENE BOT.MAT (UG/KG)	BENZOGHI PERYLENE1,12-BENZOPERYLENE BOT.MAT (UG/KG)	BENZO A ANTHRACENE1,2-BENZANTHRACENE BOT.MAT (UG/KG)	1,2-DICHLOROBENZENE BOT.MAT (UG/KG)	1,2,4-TRICHLOROBENZENE BOT.MAT (UG/KG)	1,2,5,6-DIBENZ-ANTHRACENE BOT.MAT (UG/KG)	1,3-DICHLOROBENZENE BOT.MAT (UG/KG)	1,4-DICHLOROBENZENE BOT.MAT (UG/KG)
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)											
NOV 1988 16...	<250	<1500	7000	37000	12000	4400	<250	<250	4900	<250	<250
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)											
NOV 1988 16...	<250	<1500	2500	2600	1300	1400	<250	<250	<500	<250	<250
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)											
NOV 1988 16...	<250	<1500	<250	<250	<500	<250	<250	<250	<500	<250	<250

DATE	2-CHLORONAPHTHALENE BOT.MAT (UG/KG)	2-CHLOROPHENOL BOT.MAT (UG/KG)	2-NITROPHENOL BOT.MAT (UG/KG)	DI-N-OCTYL PHTHALATE BOT.MAT (UG/KG)	2,4-DICHLOROPHENOL BOT.MAT (UG/KG)	2,4-DP, IN BOTTOM MAT. (UG/KG)	2,4-DINITROTOLUENE BOT.MAT (UG/KG)	2,4-DINITROPHENOL BOT.MAT (UG/KG)	2,4,6-TRICHLOROPHENOL BOT.MAT (UG/KG)	2,6-DINITROTOLUENE BOT.MAT (UG/KG)	3,3'-DICHLOROBENZIDINE BOT.MAT (UG/KG)
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)											
NOV 1988 16...	<250	<250	<250	<500	<250	<250	<250	<1000	<1000	<250	<1200

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	4-BROMO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-CHLORO-PHENYL PHENYL ETHER BOT.MAT (UG/KG)	4-NITRO-PHENOL BOT.MAT (UG/KG)	4,6-DINITRO-ORTHO-CRESOL BOT.MAT (UG/KG)	PHENOL (C6H-5OH) BOT.MAT (UG/KG)	PENTA-CHLORO-PHENOL BOT.MAT (UG/KG)	BIS(2-ETHYL HEXYL) PHTHAL-ATE BOT.MAT (UG/KG)	DI-N-BUTYL PHTHAL-ATE BOT.MAT (UG/KG)	BENZI-DINE BOT.MAT (UG/KG)	HEXA-CHLORO-BENZENE TOT. IN BOTTOM MATL. (UG/KG)	HEXA-CHLORO-BUT-ADIENCE BOT.MAT (UG/KG)
KENTUCKY RIVER BASIN--Continued											
03289195 TOWN BRANCH NEAR LEXINGTON, KY (LAT 38 04 29N LONG 084 32 53W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	4200	<250	<2500	<250	<250
380400084331500 WOLF RUN AT OLD FRANKFORD PIKE, KY (LAT 38 04 00N LONG 084 33 15W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	530	<250	<2500	<250	<250
03291130 EAGLE CREEK AT LUSBYS MILL, KY (LAT 38 31 53N LONG 084 43 09W)											
NOV 1988 16...	<250	<250	<1500	<1500	<250	<1500	7800	<250	<2500	<250	<250

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

BIG SANDY RIVER BASIN

03208000 LEVISA FORK BELOW FISHTRAP DAM, KY (LAT 37 25 33N LONG 082 24 45W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 04...	1230	134	560	20.0	APR 1989 27...	1330	226	444	10.5
NOV 28...	1325	241	--	9.5	JUN 14...	1310	415	495	19.5
MAR 1989 01...	1230	440	453	6.0	AUG 30...	1140	26	712	24.5
22...	1335	2400	225	7.5					

03209300 RUSSELL FORK AT ELKHORN CITY, KY (LAT 37 18 14N LONG 082 20 35W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 19...	1510	64	350	14.5	APR 1989 27...	1230	523	400	15.5
NOV 28...	1150	191	515	8.0	JUN 14...	1050	1240	302	16.0
JAN 1989 12...	1155	1020	485	3.5	SEP 19...	1215	911	398	19.0
MAR 01...	0930	823	378	5.0					
22...	1230	2590	249	7.5					

03209500 LEVISA FORK AT PIKEVILLE, KY (LAT 37 27 51N LONG 082 31 35W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 19...	1655	182	425	16.0	MAR 1989 21...	1110	3700	150	8.5
NOV 28...	1540	442	--	9.0	MAY 12...	1030	5210	400	22.0
DEC 23...	1035	1740	--	2.5	JUN 13...	1550	2420	375	16.5
FEB 1989 28...	1135	2050	404	9.5	SEP 20...	1100	1140	475	19.5

03210000 JOHNS CREEK NEAR META, KY (LAT 37 34 01N LONG 082 27 29W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 14...	1350	4.0	650	8.5	APR 1989 24...	1325	33	350	13.0
NOV 29...	1125	30	610	4.0	JUN 05...	1640	14	630	23.0
JAN 1989 17...	1620	144	810	2.5	JUL 21...	1320	115	1050	23.5
					28...	1310	73	470	22.0
FEB 10...	1000	39	230	0.5					
MAR 21...	1350	215	345	8.0					

03211500 JOHNS CREEK NEAR VAN LEAR, KY (LAT 37 44 37N LONG 082 43 27W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 20...	1515	14	265	15.5	MAR 1989 13...	1050	259	155	7.5
NOV 25...	1030	57	400	10.5	JUL 05...	1250	156	195	19.5
DEC 20...	1010	66	430	13.0	AUG 21...	1115	65	325	24.5

LEVISA FORK AT PAINTSVILLE, KY (LAT 37 48 55N LONG 082 47 30W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
NOV 1988 29...	1215	1400	720	8.0	MAY 1989 17...	1430	4940	330	14.5
DEC 22...	1315	1690	--	5.5	JUN 29...	1215	2460	409	22.5
FEB 1989 22...	1130	17400	243	7.5	SEP 06...	1515	670	375	20.0
APR 13...	1035	2580	475	13.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

LITTLE SANDY RIVER BASIN

03216350 LITTLE SANDY RIVER BELOW GRAYSON DAM NEAR LEON, KY (LAT 38 15 14N LONG 082 59 28W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
12...	1055	31	260	16.0	20...	1125	153	167	12.0
DEC					MAY				
01...	1115	135	--	3.5	26...	1410	90	189	17.5
MAR 1989					AUG				
17...	0950	129	116	7.5	23...	1310	37	242	23.5

03216500 LITTLE SANDY RIVER AT GRAYSON, KY (LAT 38 19 48N LONG 082 56 22W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
12...	1410	31	350	17.0	24...	1130	695	184	15.5
DEC					JUN				
01...	0930	227	--	6.0	23...	1240	465	256	20.5
FEB 1989					JUL				
13...	1245	256	200	29.0	24...	1420	159	237	24.0
16...	1045	9820	75	--	AUG				
APR					23...	1055	188	202	21.5
20...	1400	495	179	12.5					

03216540 EAST FORK LITTLE SANDY RIVER NEAR FALLSBURG, KY (LAT 38 14 01N LONG 082 42 32)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
NOV 1988					MAY 1989				
23...	1235	6.4	--	3.5	25...	1505	12	180	19.5
FEB 1989					JUN				
15...	1205	1410	--	5.0	27...	1510	1.2	241	25.0
16...	1410	219	73	6.0	AUG				
MAR					22...	1300	74	154	21.0
15...	1545	9.6	162	12.0					
APR									
19...	1130	21	172	13.0					

TYGARTS CREEK BASIN

03216800 TYGARTS CREEK AT OLIVE HILL, KY (LAT 38 17 57N LONG 083 10 25W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
18...	1300	0.82	275	16.5	16...	1010	49	218	8.5
DEC					MAY				
01...	1430	29	280	5.0	24...	1300	79	202	17.5
JAN 1989					JUN				
11...	1055	95	325	2.0	21...	1555	199	175	18.5
FEB					JUL				
15...	1610	3060	85	6.5	25...	1310	10	283	24.5

03217000 TYGARTS CREEK NEAR GREENUP, KY (LAT 38 33 51N LONG 082 57 08W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
DEC 1988					MAY 1989				
02...	1150	78	275	8.0	26...	1045	266	215	18.5
JAN 1989					JUN				
05...	1320	186	240	2.5	22...	1410	440	244	20.5
MAR					AUG				
16...	1255	213	210	5.5	24...	1245	141	187	23.0
APR									
21...	1300	459	230	12.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CABIN CREEK BASIN

03237900 CABIN CREEK NEAR TOLLESBORO, KY (LAT 38 34 04N LONG 083 32 14W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
NOV 1988					APR 1989				
02...	1010	0.04	600	8.0	19...	1000	92	268	10.0
DEC					JUN				
07...	0920	1.0	423	--	01...	0940	5.1	335	22.5
JAN 1989					JUL				
11...	0945	13	380	4.0	19...	1020	11	380	21.0
FEB					AUG				
08...	1005	18	320	1.0	23...	0835	1.8	420	23.0
MAR									
14...	1310	19	220	10.0					

LICKING RIVER BASIN

03248500 LICKING RIVER NEAR SALYERSVILLE, KY (LAT 37 45 03N LONG 083 05 04W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
20...	1010	5.6	1150	16.0	24...	1530	92	450	12.0
NOV					MAY				
25...	1415	88	950	8.5	01...	1320	289	355	18.0
DEC					JUN				
20...	1550	27	1010	5.0	15...	1030	388	327	19.5
FEB 1989					AUG				
15...	1650	1990	166	7.0	30...	1355	23	691	25.0

03249500 LICKING RIVER AT FARMERS, KY (LAT 38 06 55N LONG 083 32 36W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
25...	1130	257	220	15.0	18...	1035	4390	--	9.5
DEC					MAY				
05...	1445	2900	212	10.0	30...	1120	1110	135	13.0
JAN 1989					JUL				
10...	1340	3020	200	5.0	18...	0920	128	160	20.5
FEB					AUG				
07...	1045	4100	104	5.0	22...	1000	249	155	24.0
MAR									
13...	1550	4770	--	10.0					

03250000 TRIPLETT CREEK AT MOREHEAD, KY (LAT 38 11 04N LONG 083 25 48W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
25...	1555	14	340	9.5	31...	1135	1.7	185	23.0
DEC					JUL				
06...	1000	8.9	208	2.5	17...	1135	4.4	220	24.0
JAN 1989					AUG				
09...	1530	188	140	5.0	21...	1335	462	265	22.5
FEB									
06...	1415	97	140	4.5					

03250100 NORTH FORK TRIPLETT CREEK NEAR MOREHEAD, KY (LAT 38 11 57N LONG 083 28 50W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
25...	1830	26	225	9.0	17...	1400	73	72	13.5
DEC					MAY				
06...	1145	17	118	3.5	31...	0820	29	85	20.5
JAN 1989					JUL				
09...	1330	346	100	4.0	17...	1420	10	110	23.0
FEB					AUG				
06...	1140	174	110	3.5	21...	1130	2.0	130	22.0
15...	1235	9050	45	7.0					
MAR									
13...	1210	77	100	8.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

LICKING RIVER BASIN--Continued

03251000 NORTH FORK LICKING RIVER NEAR LEWISBURG, KY (LAT 38 32 57N LONG 083 47 37W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
NOV 1988					APR 1989				
02...	1555	0.17	480	7.5	18...	1615	65	300	16.5
DEC					JUN				
06...	1515	11	363	3.5	01...	1245	[illegible]2	365	24.0
JAN 1989					JUL				
10...	1800	183	350	4.0	19...	1225	15	275	21.5
FEB					AUG				
07...	1600	159	260	4.5	23...	1120	37	280	23.0
MAR									
14...	1105	87	125	9.5					

03251500 LICKING RIVER AT MCKINNEYSBURG, KY (LAT 38 35 52N LONG 084 16 00W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
03...	1445	288	180	23.0	15...	1115	6450	--	8.0
NOV					APR				
03...	0915	311	225	6.5	19...	1415	7970	--	12.0
DEC					MAY				
07...	1420	3600	350	--	31...	1245	2260	--	19.0
JAN 1989					JUL				
11...	1325	5270	180	5.0	18...	1430	295	199	24.5
FEB					AUG				
08...	1325	6040	180	4.0	24...	1005	1160	270	24.0

03252000 STONER CREEK AT PARIS, KY (LAT 38 13 45N LONG 084 15 22W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
04...	1200	7.4	770	16.0	22...	1130	1730	164	6.5
04...	1445	12	--	16.0	APR				
NOV					26...	1335	86	358	19.0
03...	1145	5.5	750	10.0	JUN				
29...	1235	196	360	8.0	15...	1120	2830	310	19.0
JAN 1989					JUL				
12...	1015	1240	340	7.5	25...	1310	35	478	27.5
FEB					AUG				
14...	1605	12800	103	5.0	30...	1315	83	393	25.5

03252500 SOUTH FORK LICKING RIVER AT CYNTHIANA, KY (LAT 38 23 27N LONG 084 18 11W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1240	33	455	23.5	26...	1645	279	327	18.5
31...	1300	12	530	10.5	JUN				
NOV					15...	1115	1700	332	20.0
29...	1720	538	440	7.0	JUL				
JAN 1989					25...	1615	145	422	29.0
12...	0705	1700	380	7.0	AUG				
MAR					30...	1535	170	351	28.0
22...	1430	5180	170	7.5					

03253500 LICKING RIVER AT CATAWBA, KY (LAT 38 42 37N LONG 084 18 39W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
04...	1235	379	270	18.0	15...	1505	6910	--	8.0
NOV					APR				
01...	1535	368	250	9.0	20...	1200	7840	--	11.5
DEC					MAY				
08...	1325	3130	365	--	31...	0855	3290	--	19.5
JAN 1989					JUL				
12...	1215	15300	250	5.0	18...	1045	411	213	23.5
FEB					AUG				
08...	1635	6820	200	4.0	25...	0915	1540	280	24.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
KENTUCKY RIVER BASIN									
03277450	CARR FORK NEAR SASSAFRAS, KY (LAT 37 13 52N LONG 083 02 10W)								
OCT 1988 03...	1520	25	365	21.0	APR 1989 11...	1655	41	223	10.5
NOV 16...	1505	25	375	13.5	MAY 16...	1550	162	220	14.0
JAN 1989 18...	1445	129	350	7.0	JUN 30...	1155	32	315	23.0
MAR 01...	1450	118	204	6.0	AUG 18...	0845	40	300	19.0
03280600	MIDDLE FORK KENTUCKY RIVER NEAR HYDEN, KY (LAT 37 08 13N LONG 083 22 17W)								
OCT 1988 04...	1320	8.0	400	20.5	APR 1989 13...	1435	274	163	10.0
NOV 17...	1405	116	390	11.5	MAY 18...	1300	258	205	17.5
JAN 1989 20...	1350	279	240	5.0	JUL 10...	1505	336	205	25.0
MAR 02...	1420	274	165	5.5	AUG 21...	1410	22	547	26.0
03280700	CUTSHIN CREEK AT WOOTON, KY (LAT 37 09 54N LONG 083 18 29W)								
OCT 1988 04...	0920	3.0	540	12.5	APR 1989 12...	1400	72	183	9.5
NOV 17...	1110	38	400	10.5	MAY 18...	1120	70	245	16.0
JAN 1989 19...	1300	89	280	5.0	JUL 10...	1125	86	260	--
MAR 02...	1200	72	199	4.5	AUG 21...	1225	8.0	510	23.5
03281040	RED BIRD RIVER NEAR BIG CREEK, KY (LAT 37 10 43N LONG 083 35 35W)								
OCT 1988 05...	1100	5.3	350	17.5	APR 1989 10...	1135	342	120	8.0
NOV 15...	1055	37	270	9.0	MAY 19...	1105	147	195	15.5
JAN 1989 18...	1030	390	172	4.5	JUL 11...	1015	173	--	22.0
FEB 28...	1045	255	147	4.5	AUG 16...	1050	42	396	22.5
03281100	GOOSE CREEK AT MANCHESTER, KY (LAT 37 09 07N LONG 083 45 37W)								
OCT 1988 05...	1350	10	625	16.0	APR 1989 10...	1455	265	117	9.0
NOV 15...	1350	59	300	11.0	MAY 19...	1340	112	200	17.0
JAN 1989 18...	1215	419	184	5.5	JUL 11...	1445	186	200	23.5
FEB 28...	1425	236	132	6.0	AUG 16...	1410	11	555	23.0
03282000	KENTUCKY RIVER AT LOCK 14 AT HEIDELBERG, KY (LAT 37 33 19N LONG 083 46 06W)								
OCT 1988 06...	1215	212	420	19.0	MAR 1989 07...	1100	49000	96	8.0
DEC 29...	1020	7460	233	8.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENTUCKY RIVER BASIN--Continued

03282500 RED RIVER NEAR HAZEL GREEN, KY (LAT 37 48 44N LONG 083 27 50W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 26...	0910	4.7	230	7.0	APR 1989 28...	1505	16	104	20.5
DEC 07...	1045	18	200	3.5	MAY 16...	1025	135	86	11.5
JAN 1989 13...	1030	495	250	3.0	SEP 05...	1015	9.7	133	20.0
FEB 03...	1325	2270	80	8.0					
14...	1110	1480	--	6.5					

03283500 RED RIVER AT CLAY CITY, KY (LAT 37 51 53N LONG 083 56 01W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 26...	1235	84	350	9.0	APR 1989 28...	1235	236	172	19.5
DEC 07...	1315	174	250	3.5	MAY 11...	1210	2710	150	18.0
JAN 1989 13...	1410	2750	425	2.5	JUL 07...	1325	89	188	25.0
MAR 08...	1145	4040	100	5.0	SEP 05...	1245	81	213	22.5

03285000 DIX RIVER NEAR DANVILLE, KY (LAT 37 38 31N LONG 084 39 39W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 03...	1630	54	440	20.0	APR 1989 24...	1740	135	--	17.0
NOV 18...	1325	223	420	9.0	JUN 07...	0930	248	--	20.5
DEC 01...	1100	336	310	5.5	JUL 24...	1610	33	325	28.5
JAN 1989 11...	1310	586	300	5.0	AUG 29...	1500	108	306	26.5
MAR 21...	0920	4550	--	8.5					

03287000 KENTUCKY RIVER AT LOCK 6 NEAR SALVISA, KY (LAT 37 55 32N LONG 084 49 17W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 05...	1605	647	390	21.0	APR 1989 27...	0950	4150	198	14.0
NOV 08...	1155	1800	500	11.0	JUN 06...	1200	4920	238	21.0
28...	1245	6080	260	8.5	JUL 26...	1045	906	280	26.5
JAN 1989 09...	1320	16700	240	7.0	SEP 06...	1010	2770	307	20.5
MAR 23...	1230	27600	185	9.0					

03288000 NORTH ELKHORN CREEK NEAR GEORGETOWN, KY (LAT 38 12 20N LONG 084 30 49W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988 27...	1050	7.5	515	8.0	FEB 1989 15...	0830	6130	107	5.5
NOV 03...	1530	1.5	480	9.5	JUL 25...	1040	33	339	25.0
29...	0940	91	425	7.5	AUG 30...	1105	53	416	23.5
JAN 1989 10...	1430	400	310	6.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

KENTUCKY RIVER BASIN--Continued

03289000 SOUTH ELKHORN CREEK AT FORT SPRING, KY (LAT 38 02 35N LONG 084 37 35W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					APR 1989				
05...	1120	5.6	540	12.5	25...	1320	14	362	17.5
NOV					25...	1535	14	361	17.5
03...	1705	4.9	690	10.0	JUN				
30...	0905	31	455	8.0	06...	1900	25	373	19.0
JAN 1989					JUL				
10...	0830	96	420	7.0	24...	1150	10	501	23.5
FEB					AUG				
23...	0930	126	210	4.5	29...	1120	5.8	550	23.5
MAR									
21...	1650	250	224	9.0					

03289300 SOUTH ELKHORN CREEK NEAR MIDWAY, KY (LAT 38 08 27N LONG 084 38 43W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					JUL 1989				
21...	1145	40	878	14.0	25...	0845	65	488	24.0
NOV					AUG				
30...	1130	122	510	7.5	30...	0910	49	628	24.0
JAN 1989									
10...	1150	385	420	7.5					

03291500 EAGLE CREEK AT GLENCOE, KY (LAT 38 42 18N LONG 084 49 26W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					FEB 1989				
18...	1345	0.28	300	15.5	09...	1340	229	250	0.5
DEC					JUL				
09...	1215	29	253	--	17...	1125	4.5	481	25.0
JAN 1989					AUG				
03...	1010	309	350	3.0	28...	1050	96	320	25.5

HARRODS CREEK BASIN

03292460 HARRODS CREEK NEAR LA GRANGE, KY (LAT 38 26 50N LONG 085 24 33W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
DEC 1988					MAR 1989				
02...	1410	4.3	520	2.5	01...	1125	16	465	2.5
JAN 1989					29...	1400	87	345	16.5
04...	1135	17	485	2.0	MAY				
FEB					02...	1110	5.9	463	14.0
02...	1230	11	351	8.5	JUL				
					12...	1340	7.2	410	24.5

SALT RIVER BASIN

03295890 BRASHEARS CREEK AT TAYLORSVILLE, KY (LAT 38 02 13N LONG 085 20 27W)

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
NOV 1988					MAY 1989				
29...	1110	107	375	8.5	04...	1410	101	330	16.0
JAN 1989					JUN				
06...	1115	460	360	5.0	07...	0935	107	380	21.0
12...	1500	2650	355	8.5	JUL				
FEB					07...	1100	155	390	25.5
01...	1120	166	420	9.0	AUG				
MAR					16...	1250	15	305	24.5
02...	1330	252	375	5.0	SEP				
31...	1025	2860	199	11.0	19...	1355	5.1	323	21.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

SALT RIVER BASIN--Continued

03297845 FLOYDS FORK NEAR CRESTWOOD, KY (LAT 38 17 55N LONG 085 25 36W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
DEC 1988					JUN 1989				
02...	1110	8.2	432	1.5	05...	1315	334	256	20.5
JAN 1989					JUL				
05...	1030	23	440	1.5	03...	1120	7.8	346	21.5
FEB					AUG				
02...	0950	19	352	9.0	17...	1145	0.27	367	21.5
MAR					SEP				
01...	1420	29	475	4.5	22...	1205	1.4	426	21.0
29...	1115	35	355	17.0					
MAY									
03...	1115	17	447	13.0					

03299000 ROLLING FORK NEAR LEBANON, KY (LAT 37 29 50N LONG 085 19 26W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
03...	1315	16	400	20.0	20...	1245	206	202	11.0
NOV					APR				
18...	1020	68	380	10.0	24...	1325	113	235	19.0
DEC					JUN				
01...	1355	218	310	7.0	13...	1525	5470	140	18.5
JAN 1989					AUG				
11...	1535	512	300	5.5	02...	1225	70	340	28.0
FEB					SEP				
13...	1450	10600	86	4.5	07...	0955	5.0	305	24.5
14...	0950	24800	85	5.0					

03300400 BEECH FORK AT MAUD, KY (LAT 37 49 58N LONG 085 17 46W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAR 1989				
03...	1040	43	360	18.0	20...	1010	613	310	9.0
NOV					APR				
08...	1315	162	403	10.5	24...	0950	188	390	15.0
DEC					JUN				
01...	1600	326	360	6.0	14...	1210	3200	235	20.0
JAN 1989					AUG				
12...	1445	5710	250	7.0	02...	0920	12	330	24.5
FEB					SEP				
13...	1120	535	253	3.0	07...	1235	12	300	25.0

03301500 ROLLING FORK NEAR BOSTON, KY (LAT 37 46 02N LONG 085 42 14W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
19...	1105	27	445	13.5	03...	1100	301	344	17.0
DEC					JUN				
01...	0850	1290	--	7.0	09...	1040	402	330	22.5
JAN 1989					JUL				
06...	1450	2150	380	14.5	05...	1355	778	304	23.0
30...	1250	893	274	8.0	AUG				
FEB					14...	1350	88	301	22.0
27...	1210	2110	197	5.5	SEP				
MAR					18...	1400	79	296	20.0
30...	1025	1670	273	15.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

GREEN RIVER BASIN

03306000 GREEN RIVER NEAR CAMPBELLSVILLE, KY (LAT 37 14 25N LONG 085 20 50W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 04...	1415	577	240	20.0	MAR 1989 31...	0835	4790	90	9.0
NOV 17...	1530	1310	175	13.5	MAY 04...	1215	232	100	14.0
DEC 15...	1240	1220	145	8.5	JUN 13...	0850	648	105	14.0
JAN 1989 12...	0850	1720	150	7.0	AUG 03...	0825	69	120	23.0
FEB 23...	1310	47	120	5.5	SEP 06..	1410	83	120	24.5

03307000 RUSSELL CREEK NEAR COLUMBIA, KY (LAT 37 07 09N LONG 085 23 38W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 04...	1630	38	320	18.5	MAR 1989 30...	1050	353	--	16.0
NOV 17...	1305	293	255	11.0	MAY 03...	1345	68	--	17.5
DEC 16...	0905	58	195	2.0	JUN 12...	1400	53	210	23.0
JAN 1989 11...	1005	387	215	7.0	AUG 03...	1115	62	215	25.0
FEB 24...	0955	601	--	2.5	SEP 06...	1020	22	240	23.0

03310300 NOLIN RIVER AT WHITE MILLS, KY (LAT 37 33 03N LONG 086 02 43W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 05...	1345	138	440	13.5	MAR 1989 27...	1110	746	310	13.5
NOV 10...	1445	388	358	13.5	MAY 02...	1110	282	360	14.5
DEC 13...	1045	319	400	6.5	JUN 16...	1245	1150	215	17.5
JAN 1989 10...	1105	1380	255	9.0	AUG 01...	1015	189	460	21.0
FEB 21...	1135	5830	140	8.0	SEP 08...	0935	100	450	21.0

03310400 BACON CREEK NEAR PRICEVILLE, KY (LAT 37 21 31N LONG 085 59 53W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 05...	1050	21	430	11.0	MAR 1989 29...	0905	72	315	15.5
NOV 09...	1530	16	357	11.5	MAY 01...	1055	38	335	17.0
DEC 12...	0945	34	280	2.5	JUN 15...	1050	235	280	17.0
JAN 1989 09...	0920	165	230	9.0	JUL 31...	0935	31	290	21.0
FEB 22...	1000	383	380	9.0	SEP 05...	0935	18	355	20.0

03311000 NOLIN RIVER AT KYROCK, KY (LAT 37 16 42N LONG 086 14 51W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 05...	1245	757	315	19.0	JUL 1989 12...	1400	1440	252	18.5
MAY 1989 25...	1355	2240	178	12.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

GREEN RIVER BASIN--Continued

03311500 GREEN RIVER AT LOCK 6, AT BROWNSVILLE, KY (LAT 37 12 25N LONG 086 15 40W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	0930	1410	300	19.0	10...	1440	2250	236	15.0
NOV					25...	1000	4060	213	16.0
09...	1230	1830	291	--	JUL				
MAR 1989					12...	1200	3320	264	22.0
22...	1140	22200	125	9.0	AUG				
					23...	0940	1380	320	22.5

03311600 BEAVERDAM CREEK AT RHODA, KY (LAT 37 09 18N LONG 086 13 35W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
06...	0820	1.3	220	11.0	25...	0848	3.9	145	17.5
NOV					JUL				
09...	1500	2.7	201	--	12...	0912	3.9	176	20.0
APR 1989					AUG				
24...	1413	4.0	179	20.0	23...	0850	0.76	237	21.5

03313000 BARREN RIVER NEAR FINNEY, KY (LAT 36 53 42N LONG 086 08 02W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
DEC 1988					JUN 1989				
19...	1355	1670	224	--	26...	1340	3020	190	19.5
FEB 1989					AUG				
08...	1530	4170	120	6.5	18...	1155	213	200	24.5
APR					SEP				
24...	1730	3700	110	11.0	20...	0915	1930	228	23.0
MAY									
16...	1430	3110	122	12.5					

03313700 WEST FORK DRAKES CREEK NEAR FRANKLIN, KY (LAT 36 43 24N LONG 086 33 08W

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
05...	1150	8.3	360	17.0	17...	1400	30	170	20.0
DEC					JUN				
20...	1425	23	311	--	27...	1250	96	245	21.5
FEB 1989					AUG				
09...	1530	144	155	5.5	07...	1700	37	330	22.5
APR					SEP				
25...	1455	64	227	18.5	21...	0900	10	240	18.0

03314500 BARREN RIVER AT BOWLING GREEN, KY (LAT 37 00 04N LONG 086 25 51W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					JUN 1989				
04...	1715	367	310	19.0	27...	0802	3710	180	20.0
FEB 1989					AUG				
09...	1330	5540	136	2.5	08...	1015	753	242	24.0
APR					SEP				
25...	0915	4280	138	13.0	20...	1345	2060	262	22.0
MAY									
17...	0910	3330	185	13.5					

03315500 GREEN RIVER AT LOCK 4 AT WOODBURY, KY (LAT 37 10 56N LONG 086 37 48W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					JUL 1989				
06...	1600	2000	310	18.0	13...	1000	8860	236	21.5
NOV					AUG				
10...	1910	4690	279	13.5	24...	0955	2100	320	25.0
MAY 1989									
24...	1515	9450	180	17.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

GREEN RIVER BASIN--Continued

03318500 ROUGH RIVER AT FALLS OF ROUGH, KY (LAT 37 35 20N LONG 086 33 05W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
05...	1630	109	220	13.0	11...	1530	817	179	11.5
NOV					JUN				
09...	0830	545	239	13.0	20...	1630	1660	196	17.5
DEC					JUL				
20...	1045	2120	--	15.5	25...	1510	220	187	22.0
MAR 1989					SEP				
21...	1144	3060	113	7.0	05...	1910	235	221	21.5

03318800 CANEY CREEK NEAR HORSE BRANCH, KY (LAT 37 27 50N LONG 086 39 20W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
05...	1430	12	220	23.0	10...	1348	57	186	14.5
NOV					JUN				
08...	1434	89	181	12.0	13...	1719	2130	114	22.0
DEC					JUL				
19...	1136	15	--	5.0	25...	1109	0.48	191	31.0
JAN 1989					SEP				
24...	1452	69	128	6.5	05...	1155	8.9	160	27.0
MAR									
20...	1406	166	140	10.0					

03320000 GREEN RIVER AT LOCK 2 AT CALHOUN, KY (LAT 37 32 02N LONG 087 15 50W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					JUL 1989				
05...	1140	2170	330	21.0	11...	1330	11800	218	24.0
MAY 1989					AUG				
24...	1215	11300	161	18.0	22...	1220	1710	397	29.0

03320500 POND RIVER NEAR APEX, KY (LAT 37 07 20N LONG 087 19 10W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	1200	6.0	320	15.0	04...	1720	34	302	17.0
DEC					JUN				
22...	1254	157	--	8.0	22...	1735	66	284	28.5
JAN 1989					JUL				
27...	1325	357	251	--	26...	1128	14	286	29.0
FEB					SEP				
16...	1345	11000	54	7.0	07...	0915	8.2	286	25.5
MAR									
22...	1143	460	226	8.0					

HIGHLAND CREEK BASIN

03322360 BEAVERDAM CREEK NEAR CORYDON, KY (LAT 37 42 14N LONG 087 41 52W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
JAN 1989					JUN 1989				
26...	1536	15	448	--	21...	1315	0.10	574	24.5
MAR					SEP				
23...	1431	5.9	431	12.5	06...	1125	0.003	455	25.5
MAY									
12...	1339	1.0	509	24.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

TRADEWATER RIVER BASIN

03383000 TRADEWATER RIVER AT OLNEY, KY (LAT 37 13 26N LONG 087 46 53W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					MAY 1989				
07...	1430	7.5	320	15.0	04...	1131	25	497	17.0
DEC					JUN				
22...	0955	36	--	6.0	22...	1131	90	326	23.5
JAN 1989					JUL				
03...	1225	866	--	5.0	26...	0930	11	286	25.0
27...	1100	247	291	--	SEP				
MAR					06...	1414	8.9	294	25.0
22...	1618	1040	213	8.5					

CUMBERLAND RIVER BASIN

03400500 POOR FORK AT CUMBERLAND, KY (LAT 36 58 26N LONG 082 59 38W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1115	16	739	16.0	04...	0955	292	294	13.5
NOV					MAY				
14...	1110	33	490	7.5	16...	0950	194	375	11.5
JAN 1989					JUL				
04...	1110	95	364	4.0	05...	1025	88	506	19.0
MAR					AUG				
01...	1040	168	372	5.5	09...	0945	65	448	16.0

03400800 MARTINS FORK NEAR SMITH, KY (LAT 36 45 08N LONG 083 15 27W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
06...	1330	36	171	--	05...	1210	249	138	13.5
NOV					MAY				
18...	1335	181	165	11.0	15...	1145	295	152	14.0
JAN 1989					JUL				
10...	1300	304	155	7.0	03...	1155	58	144	21.5
FEB					AUG				
28...	1200	271	139	6.5	10...	1300	12	154	24.5

03401000 CUMBERLAND RIVER NEAR HARLAN, KY (LAT 36 50 48N LONG 083 21 21W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1045	91	380	18.5	04...	1225	1760	286	14.0
NOV					MAY				
15...	1055	265	340	8.0	16...	1150	869	312	12.0
JAN 1989					JUL				
04...	1355	624	304	4.5	05...	1235	610	355	21.0
MAR					AUG				
01...	1230	881	307	6.5	10...	1145	148	491	20.0

03403910 CLEAR FORK AT SAXTON, KY (LAT 36 38 02N LONG 084 06 42W)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (FT^3/S)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE WATER (DEG C)
OCT 1988					APR 1989				
05...	1045	55	500	15.5	03...	1320	647	272	13.5
NOV					MAY				
17...	0910	269	335	9.5	18...	1030	329	312	16.5
JAN 1989					JUN				
18...	1305	1060	261	5.5	28...	1335	491	338	25.0
FEB					AUG				
22...	1020	4960	173	7.5	07...	1125	282	317	22.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

CUMBERLAND RIVER BASIN--Continued

03404900 LYNN CAMP CREEK AT CORBIN, KY (LAT 36 57 05N LONG 084 05 37W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 07...	1040	1.8	843	15.5	APR 1989 03...	1155	141	426	13.5
NOV 15...	1000	20	472	9.0	MAY 17...	0920	44	484	15.0
JAN 1989 03...	1120	62	418	6.5	JUN 28...	1030	176	299	22.0
FEB 21...	1025	1800	153	8.5	AUG 11...	1240	7.7	659	22.5

03406500 ROCKCASTLE RIVER AT BILLOWS, KY (LAT 37 10 16N LONG 084 17 46W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 04...	1450	51	296	16.5	APR 1989 06...	1340	2710	132	11.5
NOV 16...	1240	243	258	10.0	MAY 18...	1205	493	166	16.0
JAN 1989 19...	1220	1360	162	5.5	JUN 27...	1350	502	180	22.0
FEB 21...	1510	23200	88	8.0	AUG 15...	1255	50	249	24.0

03438000 LITTLE RIVER NEAR CADIZ, KY (LAT 36 46 40N LONG 087 43 18W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 05...	1620	49	460	15.5	JUN 1989 28...	1305	284	346	20.0
FEB 1989 10...	1540	629	230	7.5	AUG 07...	1150	679	326	18.5
APR 24...	1230	5160	150	14.5	SEP 19...	1130	50	422	18.5
26...	1345	268	310	19.0					
MAY 18...	1345	151	140	22.0					

03438220 CUMBERLAND RIVER NEAR GRAND RIVERS, KY (LAT 37 01 18N LONG 088 13 16W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 03...	0935	10900	241	--	MAR 1989 02...	1030	43200	203	28.0
NOV 03...	1050	7010	230	14.0					

TENNESSEE RIVER BASIN

03610200 CLARKS RIVER AT ALMO, KY (LAT 36 41 30N LONG 088 16 25W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988 06...	1530	4.6	210	17.0	MAY 1989 01...	1410	17	--	19.5
NOV 02...	1208	5.6	190	13.0	JUN 12...	1833	4380	178	22.0
JAN 1989 23...	1411	53	143	6.5	JUL 27...	1230	13	174	27.5
FEB 21...	1435	4120	34	7.0	SEP 08...	1145	3.4	180	26.5
MAR 27...	1410	57	139	18.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

MASSAC CREEK BASIN

03611260 MASSAC CREEK NEAR PADUCAH, KY (LAT 37 02 29N LONG 088 42 39W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1155	0.69	140	18.0	06...	1134	14	105	9.5
NOV					27...	1025	1.6	125	21.5
01...	1046	0.64	120	9.0	MAY				
21...	1107	15	117	--	19...	0935	0.86	110	19.5
DEC					JUN				
22...	1055	1.1	129	--	29...	0940	2.7	115	23.0
FEB 1989					AUG				
06...	1050	12	53	0.5	11...	1425	0.76	123	21.5
15...	1100	924	26	5.5	SEP				
MAR					18...	1400	0.56	135	20.5
31...	1050	46	61	10.5					

OHIO RIVER MAIN STEM BASIN

03611500 OHIO RIVER AT METROPOLIS, ILL (LAT 37 08 51N LONG 088 44 27W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
FEB 1989				
28...	1015	989000	205	5.0

BAYOU DE CHIEN BASIN

07024000 BAYOU DE CHIEN NEAR CLINTON, KY (LAT 36 37 43N LONG 088 57 50W)

DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)	DATE	TIME	STREAMFLOW, INSTANTANEOUS (FT^3/S)	SPECIFIC CONDUCTANCE (US/CM)	TEMPERATURE WATER (DEG C)
OCT 1988					APR 1989				
03...	1405	26	100	17.0	27...	1330	23	105	26.5
NOV					MAY				
01...	1324	18	95	12.0	19...	1220	19	110	19.5
21...	1325	93	81	--	JUN				
FEB 1989					29...	1420	65	78	26.0
06...	1325	69	45	2.0	AUG				
14...	1405	2260	27	7.0	11...	1145	14	71	21.5
MAR					SEP				
27...	1330	42	85	20.0	18...	1055	16	74	18.0

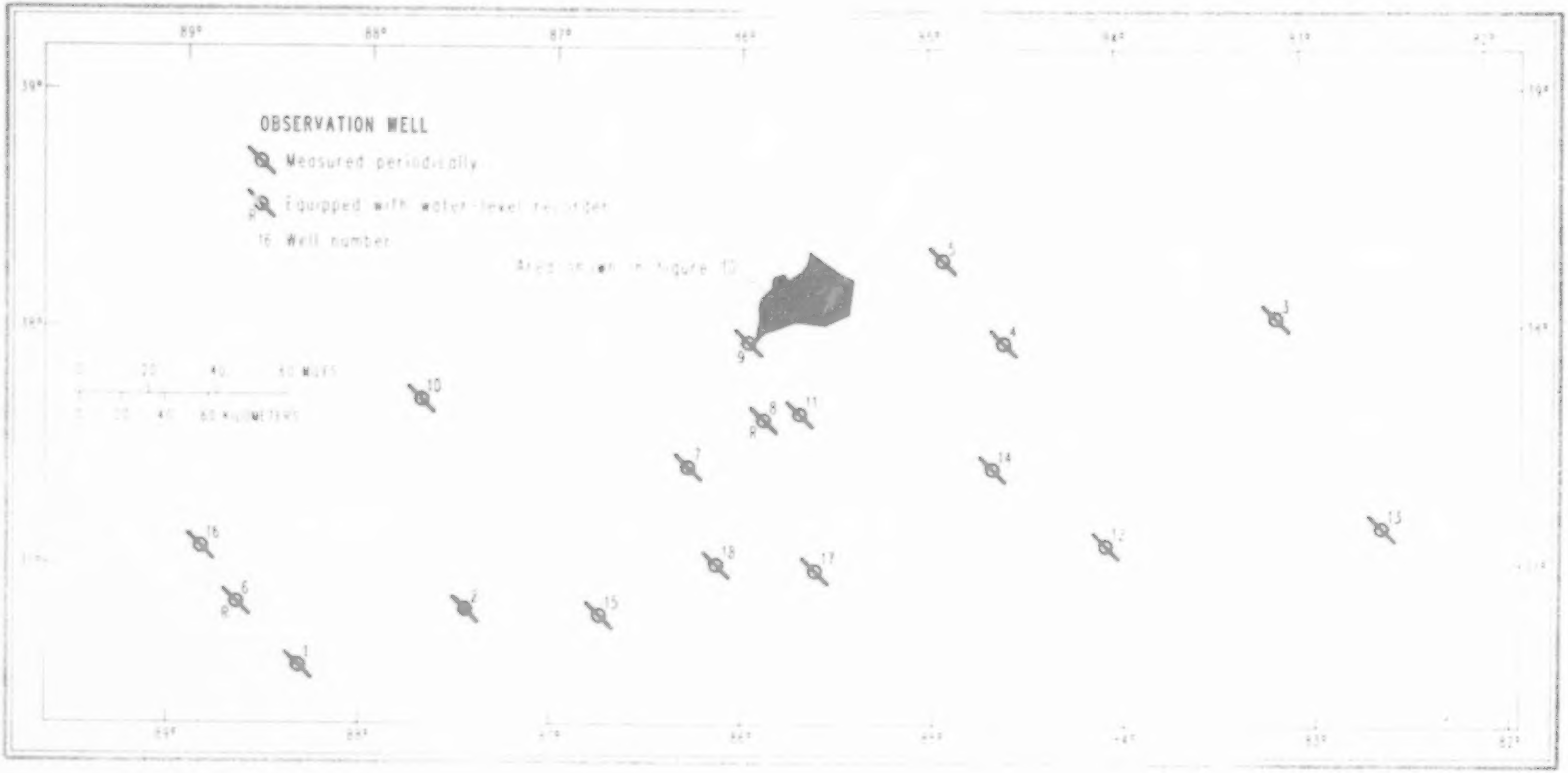
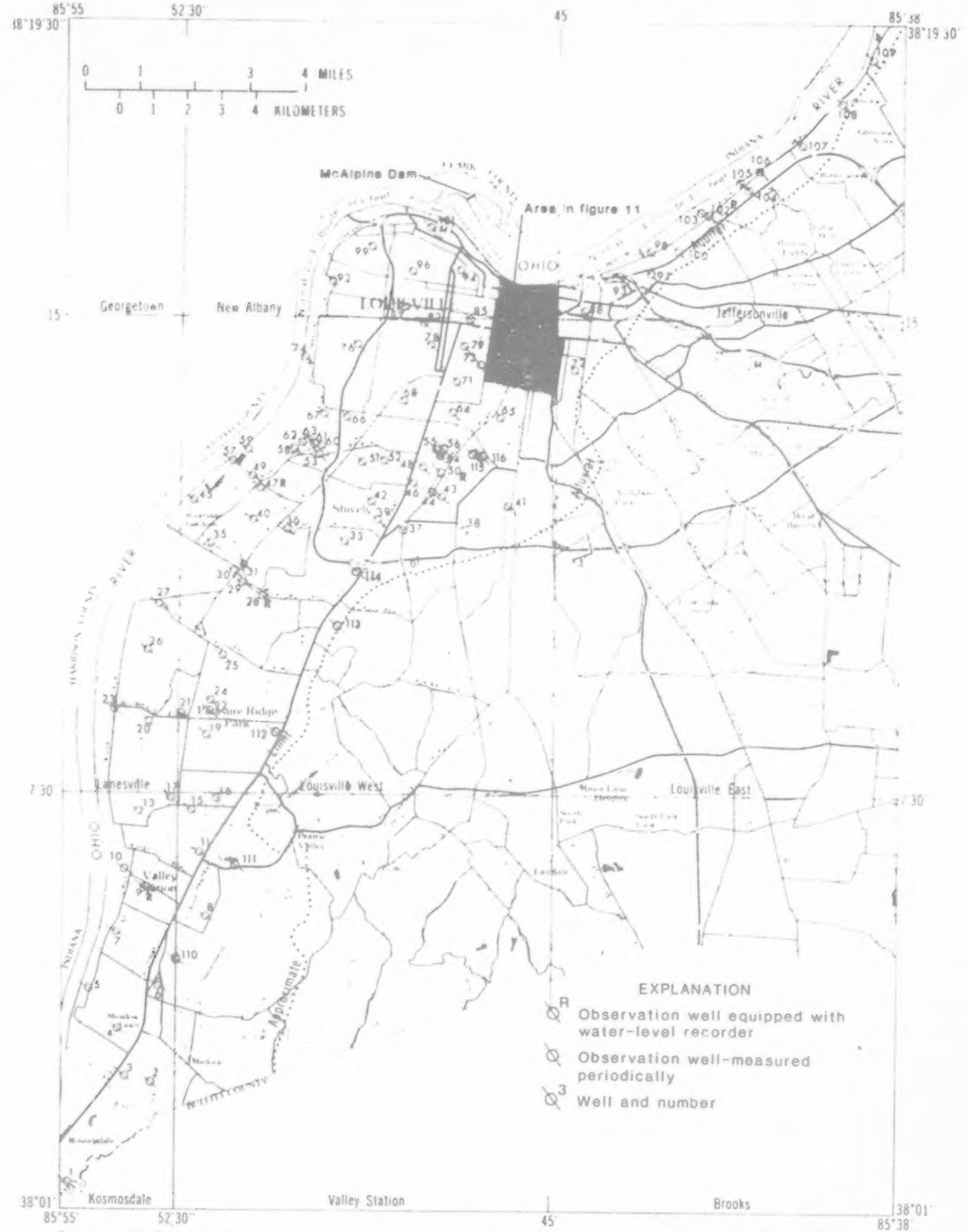
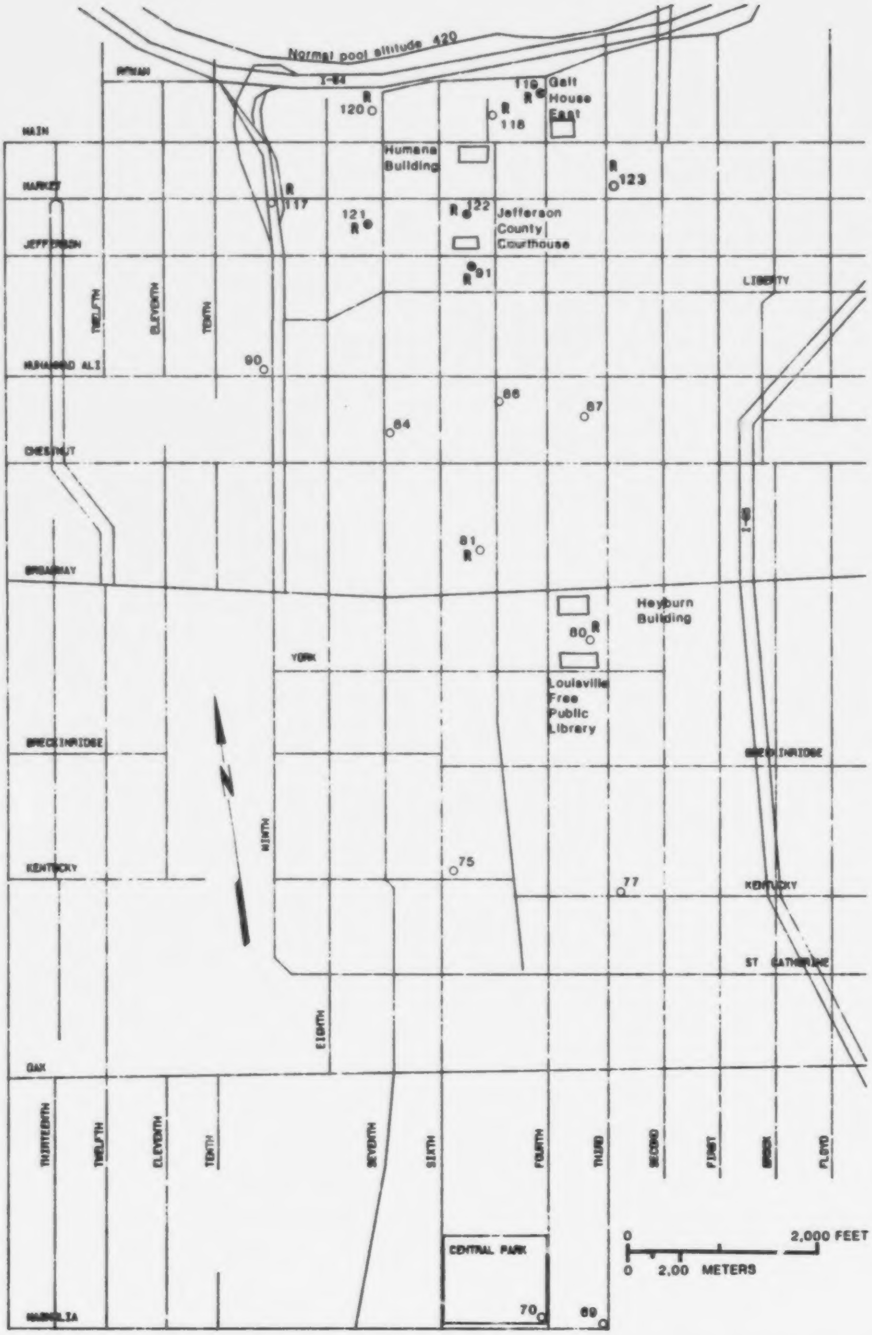

89°
88°
87°
86°
85°
84°
83°
82°
39°
38°
37°
OBSERVATION WELL
Measured periodically
R Equipped with water-level recorder
16 Well number
Area shown in figure 10
0 20 40 60 MILES
0 20 40 60 KILOMETERS
1
2
3
4
5
6
R
7
8
R
9
10
11
12
13
14
15
16
17
18

Figure 9.--Location of observation wells in Kentucky.


85°55'
52'30"
45
85°38'
38°19'30"
0 1 3 4 MILES
0 1 2 3 4 KILOMETERS
McAlpine Dam
Area in figure 11
OHIO
RIVER
INDIANA
Georgetown
New Albany
LOUISVILLE
Jeffersonville
Shively
Pleasure Ridge Park
Lanesville
Louisville West
Louisville East
Valley Station
Kosmosdale
Brooks
HARRISON COUNTY
Approximate
15'
7'30"
38°01'
EXPLANATION
Observation well equipped with water-level recorder
Observation well-measured periodically
Well and number
R
3

Base from U.S. Geological Survey

Figure 10.--Location of observation wells in Jefferson County.


Normal pool altitude 420
ROWAN
I-64
MAIN
MARKET
JEFFERSON
LIBERTY
MUHAMMAD ALI
CHESTNUT
BROADWAY
YORK
BRECKINRIDGE
KENTUCKY
ST CATHERINE
OAK
MAGNOLIA
TWELFTH
ELEVENTH
TENTH
NINTH
EIGHTH
THIRTEENTH
SEVENTH
SIXTH
FOURTH
THIRD
SECOND
FIRST
BROOK
FLOYD
CENTRAL PARK
Galt House East
Humana Building
Jefferson County Courthouse
Heyburn Building
Louisville Free Public Library
120
119
118
117
121
122
123
91
90
86
87
84
81
80
75
77
70
69
R
0
2,000 FEET
0
2,00 METERS

○R Observation well equiped with water-level recorder

Figure 11.--Location of observation wells in downtown Louisville.

CALLOWAY COUNTY

363634088191601. Map number 1.
LOCATION.--Lat 36°36'34", long 88°19'16", Hydrologic Unit 06040006, County Code 035, Murray quadrangle, 200 ft southeast of the intersection of 15th and Main Streets, in Murray. Owner: Joe Parks.
AQUIFER.--Sand of McNairy Formation of Late Cretaceous age. Aquifer code: 211MCNR.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 12 in, depth 345 ft, screened 290-328, 330-334 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum is 549.14 ft, National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter 4.75 ft above land-surface datum.
REMARKS.--Reported that well was used for several years to dispose of waste motor oil from a gasoline service station.
PERIOD OF RECORD.--March 1948 to September 1983 and October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 123.23 ft below land-surface datum, Mar. 3, 1953; lowest measured, 130.09 ft below land-surface datum, Aug. 8, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 10, 1988	125.32	Mar. 27	125.05	Jul. 27	125.78
Jan. 6, 1989	125.61	May 1	125.52	Sept. 8	126.64
Jan. 23	125.66	Jun. 12	125.10		

CHRISTIAN COUNTY

365142087270401. Map number 2.
LOCATION.--Lat 36°51'42", long 87°27'04", Hydrologic Unit 05130205, County Code 047, Hopkinsville quadrangle, at Western State Hospital, 75 ft west of gravel road, 500 ft south of U.S. Highway 68, 2.0 mi east of Hopkinsville. Owner: State of Kentucky.
AQUIFER.--Ste. Genevieve Limestone of Late Mississippian age. Aquifer code: 333SGVV.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 85 ft, cased to 10 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 550 ft. Measuring point: Floor of shelter 3.06 ft above land-surface datum.
PERIOD OF RECORD.--February 1950 to September 1983 and October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.26 ft below land-surface datum, Feb. 22, 1961, lowest measured, 25.01 ft below land-surface datum, Sept. 25, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 16, 1988	14.86	Apr. 26	14.16	Aug. 7	18.19
Dec. 21	12.84	May 18	16.75	Sept. 19	16.85
Feb. 10, 1989	13.28	Jun. 28	13.49		

ELLIOTT COUNTY

380425083091901. Map number 3.
LOCATION.--Lat 38°04'25", long 83°09'19", Hydrologic Unit 05090104, County Code 063, Sandy Hook quadrangle, in a hay field, 100 ft south of a tobacco barn, 250 ft north of State Highway 7, 1.9 mi southwest of Sandy Hook. Owner: Roy Adkins.
AQUIFER.--Lee Formation of Early Pennsylvanian age. Aquifer code: 327LEE.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 5 in, depth 70 ft, length of casing unknown, open hole below casing.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 780 ft. Measuring point: Floor of recorder shelter 3.55 ft above land-surface datum.
REMARKS.--Pump test run Oct. 10, 1965. Estimated yield based on recovery, 0.4 gal/min.
PERIOD OF RECORD.--September 1952 to September 1984 and July 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.50 ft below land-surface datum, July 18, 1971; lowest measured, 46.35 ft below land-surface datum, Dec. 17, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, JULY 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Jul. 1, 1988	27.91	Jan. 18, 1989	25.80	Aug. 23	23.05
Dec. 6	26.30	Mar. 19	24.78		

FAYETTE COUNTY

375928084362001. Map number 4.
LOCATION.--Lat 38°59'28", long 84°36'20", Hydrologic Unit 05100205, County Code 067, Nicholasville quadrangle, 50 ft west of a farmhouse, 15 ft east of an old chicken house. 600 ft north of where Keene Road crossed the Fayette-Jessamine County line, 1.2 mi southwest of South Elkhorn: Owner: M.A. Kehrt.
AQUIFER.--Grier Limestone Member of Lexington Limestone of Middle Ordorician age. Aquifer code: 364GRIR.
WELL CHARACTERISTICS.--Drilled unused artesian and water-table well, diameter 6 in, depth 132 ft, cased to 15 ft, open hole 15 to 132 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 940 ft. Measuring point: Floor of recorder shelter 2.75 ft above land-surface datum.
REMARKS.--Lowest water level is a pumping level.
PERIOD OF RECORD.--November 1952 to September 1984 and June 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.67 ft below land-surface datum, Jan. 11, 1974; lowest measured, 48.56 ft below land-surface datum, Mar. 12, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, JUNE 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Jun. 29, 1988	13.46	Feb. 13	11.17	Jul. 24	12.35
Nov. 4	16.43	Mar. 20	11.44	Aug. 29	12.51
Nov. 30	10.80	Apr. 24	12.36		
Jan. 10, 1989	7.26	Jun. 6	12.23		

FRANKLIN COUNTY

382031084553901. Harp Road Test Well. Map number 5.
LOCATION.--Lat 38°20'31", long 84°55'39", Hydrologic Unit 05100205, County Code 073, Polsgrove quandrangle, in a pasture at an old farmhouse site, 50 ft north of Harp Road, 2.3 mi northeast of junction of Harp Road and U.S. Highway 421, 2.3 mi southwest of Polsgrove. Owner: Franklin County.
AQUIFER.--Kope and Clays Ferry Formations of Late Ordovician age (previously published as Lexington Limestone of Middle Ordovician age). Aquifer code: 361KOCL (previously published as 364LXNG).
WELL CHARACTERISTICS.--Drilled unused artesian and water-table test well, diameter 6 in, depth 450 ft, cased to 15 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 890 ft. Measuring point: Top of pipe plug .50 ft above land-surface datum.
PERIOD OF RECORD.--August 1973 to January 1983 and October 1988 to current year. August 1973 to September 1976 published in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.87 ft below land-surface datum, Sept. 14, 1979; lowest measured, 119.82 ft below land-surface datum, Sept. 12, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 29, 1988	41.70	Mar. 29	35.67	Aug. 15	40.70
Jan. 4, 1989	35.96	May 4	35.96	Sept. 21	43.01
Feb. 1	36.65	Jun. 6	35.81		
Mar. 1	35.61	Jul. 12	41.01		

GRAVES COUNTY

365210088391301. Map number 6.

LOCATION.--Lat 36°52'10", long 88°39'13", Hydrologic Unit 08010201, County Code 083, Hickory quadrangle, in a cultivated field, 200 ft east of a private road, 1.2 mi northwest of Viola. Owner: J. Whittemore.

AQUIFER.--Sand of Claiborne Group of Eocene age. Aquifer Code: 124CLBR.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 106 ft, cased to 85 ft, screened 85-105 ft.

INSTRUMENTATION.--ADR recorder -- 60-minute punch.

DATUM.--Altitude of land-surface datum is 405.65 ft, National Geodetic Vertical Datum. Measuring point: Floor of shelter, 4.03 ft above land-surface datum.

PERIOD OF RECORD.--February 1951 to September 1984 and October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.56 ft below land-surface datum, Apr. 8, 1989; lowest measured, 19.24 ft below land-surface datum, Jan. 10, 1975.

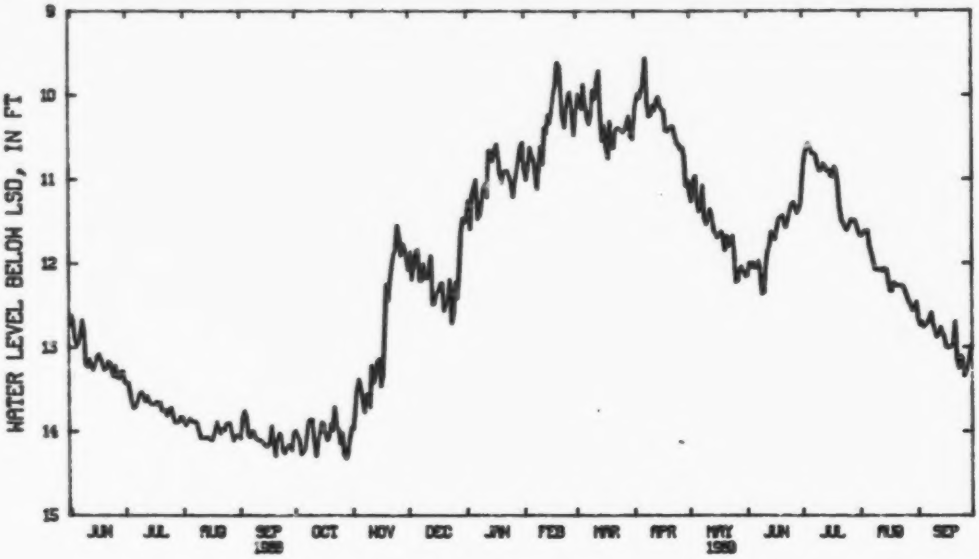
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988
OBSERVATION AT 12:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	12.75	13.41	13.84	14.05
2	---	---	---	---	---	---	---	---	12.62	13.43	13.89	14.09
3	---	---	---	---	---	---	---	---	12.68	13.42	13.93	13.84
4	---	---	---	---	---	---	---	---	12.89	13.54	13.89	13.76
5	---	---	---	---	---	---	---	---	12.97	13.66	13.85	13.84
6	---	---	---	---	---	---	---	---	12.95	13.72	13.88	14.04
7	---	---	---	---	---	---	---	---	12.82	13.70	13.89	14.07
8	---	---	---	---	---	---	---	---	12.68	13.64	13.89	13.99
9	---	---	---	---	---	---	---	---	12.83	13.56	13.91	14.01
10	---	---	---	---	---	---	---	---	13.21	13.53	13.99	14.08
11	---	---	---	---	---	---	---	---	13.23	13.58	14.08	14.10
12	---	---	---	---	---	---	---	---	13.14	13.64	14.08	14.11
13	---	---	---	---	---	---	---	---	13.21	13.58	14.08	14.10
14	---	---	---	---	---	---	---	---	13.27	13.64	14.08	14.13
15	---	---	---	---	---	---	---	---	13.22	13.67	14.07	14.16
16	---	---	---	---	---	---	---	---	13.11	13.68	14.09	14.18
17	---	---	---	---	---	---	---	---	13.08	13.68	14.11	14.18
18	---	---	---	---	---	---	---	---	13.14	13.65	14.06	14.11
19	---	---	---	---	---	---	---	---	13.20	13.68	13.98	13.94
20	---	---	---	---	---	---	---	---	13.27	13.66	13.89	14.16
21	---	---	---	---	---	---	---	---	13.25	13.75	13.99	14.29
22	---	---	---	---	---	---	---	---	13.17	13.76	14.03	14.10
23	---	---	---	---	---	---	---	---	13.19	13.75	13.97	14.02
24	---	---	---	---	---	---	---	---	13.28	13.81	13.99	14.05
25	---	---	---	---	---	---	---	---	13.34	13.74	13.91	14.23
26	---	---	---	---	---	---	---	---	13.22	13.72	13.90	14.26
27	---	---	---	---	---	---	---	---	13.36	13.83	13.91	14.20
28	---	---	---	---	---	---	---	---	13.37	13.89	14.01	14.16
29	---	---	---	---	---	---	---	---	13.29	13.90	14.11	14.18
30	---	---	---	---	---	---	---	---	13.29	13.89	14.07	14.23
31	---	---	---	---	---	---	---	---	---	13.83	14.04	---
MAX	---	---	---	---	---	---	---	---	13.37	13.90	14.11	14.29
MIN	---	---	---	---	---	---	---	---	12.62	13.41	13.84	13.76

GRAVES COUNTY--Continued

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
OBSERVATION AT 12:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.01	13.95	11.95	11.51	10.56	10.47	10.52	11.01	12.15	11.28	11.62	12.46
2	13.99	13.97	12.07	11.44	10.87	10.21	10.26	11.17	12.14	10.97	11.67	12.66
3	14.05	13.75	11.86	11.25	11.00	9.98	10.08	11.26	11.99	10.74	11.67	12.73
4	14.12	13.52	12.19	11.59	10.86	10.12	9.98	11.01	12.04	10.62	11.62	12.70
5	14.27	13.38	12.02	11.19	10.62	10.16	10.03	10.96	11.99	10.57	11.62	12.76
6	14.24	13.49	11.85	11.09	10.71	9.87	9.93	11.26	12.05	10.64	11.61	12.73
7	14.20	13.63	11.83	11.00	10.77	10.12	9.87	11.38	12.04	10.69	11.80	12.71
8	14.04	13.77	12.21	11.47	10.91	10.27	9.56	11.26	11.97	10.69	11.89	12.66
9	13.88	13.56	12.20	11.42	11.11	10.34	10.07	11.07	12.08	10.72	11.98	12.59
10	13.86	13.56	12.00	11.29	10.82	10.20	10.25	11.46	12.36	10.81	12.07	12.73
11	13.87	13.71	12.17	11.11	10.61	9.94	10.23	11.53	12.34	10.90	12.08	12.81
12	14.11	13.21	12.17	11.05	10.82	10.04	10.12	11.44	12.02	10.89	12.08	12.88
13	14.29	13.42	12.03	11.21	10.38	9.84	10.18	11.35	11.85	10.81	12.07	12.85
14	14.11	13.36	11.91	10.65	10.45	9.71	10.06	11.46	11.79	10.84	12.09	12.76
15	14.02	13.17	12.49	10.66	10.23	10.24	10.02	11.61	11.62	10.90	12.06	12.84
16	13.89	13.14	12.47	10.78	10.33	10.54	10.13	11.64	11.66	10.88	12.08	12.87
17	13.91	13.46	12.35	10.65	10.19	10.36	10.17	11.69	11.71	10.95	12.19	12.99
18	14.03	13.32	12.32	10.58	10.00	10.61	10.18	11.65	11.58	10.97	12.33	13.01
19	14.11	12.78	12.24	10.70	9.87	10.75	10.42	11.62	11.47	10.85	12.33	12.99
20	14.05	12.25	12.23	10.93	9.61	10.31	10.43	11.69	11.45	10.90	12.23	13.00
21	13.91	12.44	12.56	11.04	9.66	10.63	10.39	11.84	11.43	11.07	12.26	12.95
22	13.99	12.19	12.45	10.91	9.94	10.62	10.37	11.67	11.52	11.34	12.27	12.70
23	13.71	12.03	12.46	10.89	10.28	10.41	10.37	11.79	11.57	11.49	12.27	13.15
24	13.94	11.88	12.19	10.90	10.38	10.39	10.48	11.72	11.47	11.52	12.26	13.25
25	13.99	11.84	12.71	10.97	10.15	10.39	10.57	11.67	11.38	11.58	12.28	13.10
26	14.14	11.55	12.57	11.03	9.98	10.42	10.59	11.88	11.30	11.61	12.34	13.14
27	14.02	11.69	12.22	11.20	9.96	10.44	10.64	12.22	11.27	11.56	12.40	13.34
28	14.27	11.90	12.41	11.02	10.20	10.41	10.62	12.20	11.33	11.48	12.46	13.27
29	14.32	11.77	12.06	10.89	---	10.33	10.73	12.06	11.40	11.49	12.50	13.19
30	14.24	11.83	11.62	10.75	---	10.25	11.08	12.03	11.36	11.49	12.56	13.06
31	14.07	---	11.46	10.61	---	10.48	---	12.10	---	11.55	12.53	---
MAX	14.32	13.97	12.71	11.59	11.11	10.75	11.08	12.22	12.36	11.61	12.56	13.34
MIN	13.71	11.55	11.46	10.58	9.61	9.71	9.56	10.96	11.27	10.57	11.61	12.46



GRAYSON COUNTY

372822086165801. Map number 7.
LOCATION.--Lat 37°28'22", long 86°16'58", Hydrologic Unit 05110004, County Code 085, Leitchfield quadrangle, at the end of a city park road, 500 ft north of a dam and lake, 1,000 ft northeast of the old city water treatment plant, 0.8 mi southeast of Grayson County Courthouse, in Leitchfield. Owner: City of Leitchfield.
AQUIFER.--Hardinsburg Sandstone of Late Mississippian age. Aquifer code: 332HDBG.
WELL CHARACTERISTICS.--Drilled unused artesian and water-table well, diameter 7 in, depth 384 ft, length casing unknown.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is 660 ft. Measuring point: Top of pipe flange 5.12 ft above land-surface datum.
PERIOD OF RECORD.--December 1979 to September 1983 and October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.13 ft below land-surface datum, Mar. 21, 1989; lowest measured, 77.28 ft below land-surface datum, Sept. 1, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 9, 1988	76.46	Mar. 21	75.13	Jul. 25	75.63
Dec. 20	76.07	May 11	75.67	Sept. 5	75.78
Jan. 25, 1989	75.47	Jun. 14	75.26		

HARDIN COUNTY

373847085541701. Local number OW-7, map number 8.

LOCATION.--Lat 37°38'47", long 85°54'17", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, from road U.S 62, 2.5 miles south on Gaither Station Road, 250 ft west on paved road, 170 ft west of paved road, 650 ft east of Valley Creek. Owner: City of Elizabethtown.

AQUIFER.--St. Genevieve Limestone of Late Mississippian age. Aquifer Code: 333SGVV.

WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 12 in, depth 155 ft, with 46 ft of 12 in surface casing.

INSTRUMENTATION.--Digital recorder -- 30-minute punch.

DATUM.--Elevation of land-surface datum is 664.37 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 3.2 ft above land-surface datum.

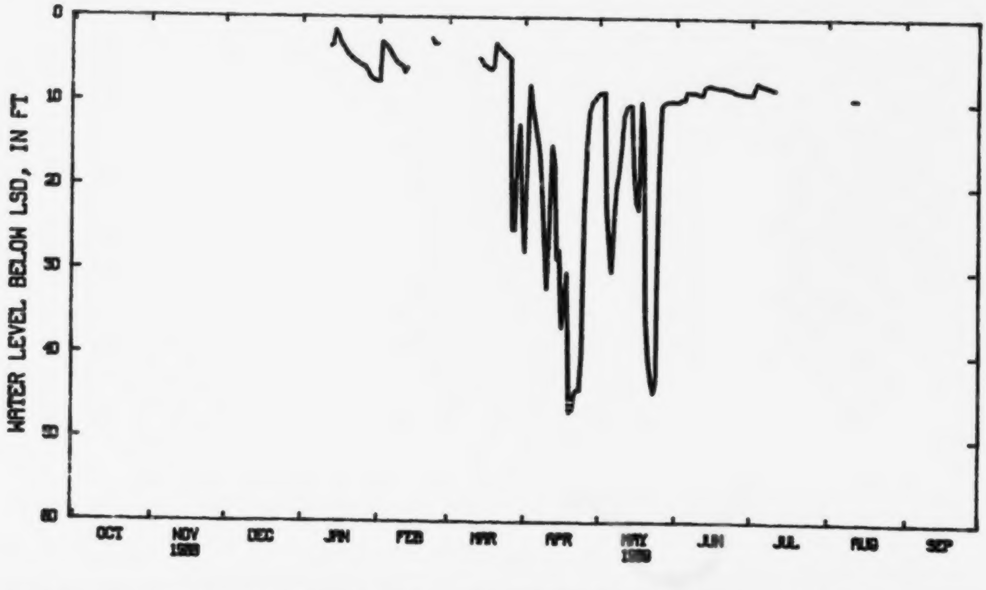
REMARKS.--Water levels affected by stage of Valley Creek and pumpage of nearby production well.

PERIOD OF RECORD.--January 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 1.56 ft below land surface datum, Jan. 15, 1989; lowest, 46.91 ft below land-surface datum, Apr. 20, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	7.65	---	22.64	9.20	9.83	8.98	---	9.25
2	---	---	---	---	7.70	---	27.88	8.90	9.86	9.00	---	---
3	---	---	---	---	3.00	---	16.70	8.87	9.89	8.19	---	---
4	---	---	---	---	3.30	---	8.03	8.83	9.53	7.53	---	---
5	---	---	---	---	3.64	---	10.83	22.79	9.64	7.79	---	---
6	---	---	---	---	4.10	---	12.48	26.49	8.68	7.91	---	---
7	---	---	---	---	4.63	---	14.23	30.22	8.76	8.02	---	---
8	---	---	---	---	5.14	---	16.21	23.81	8.83	8.11	---	---
9	---	---	---	---	5.50	---	20.52	19.93	8.68	8.21	---	---
10	---	---	---	---	5.70	---	26.47	18.06	8.87	8.32	---	---
11	---	---	---	---	5.90	---	32.29	15.35	8.99	8.40	9.56	---
12	---	---	---	---	6.59	---	24.54	11.57	9.04	---	9.56	---
13	---	---	---	3.53	6.05	---	15.22	10.60	8.15	---	9.57	---
14	---	---	---	3.25	---	4.89	17.61	10.37	8.00	---	---	---
15	---	---	---	1.56	---	5.13	28.69	10.37	7.84	---	---	---
16	---	---	---	2.26	---	5.68	27.67	17.97	8.00	---	---	---
17	---	---	---	3.05	---	5.84	36.90	21.94	8.11	---	---	---
18	---	---	---	3.54	---	6.14	33.54	22.73	8.18	---	---	---
19	---	---	---	4.02	---	6.22	30.34	9.99	8.21	---	---	---
20	---	---	---	4.44	---	5.90	46.91	13.70	8.23	---	---	---
21	---	---	---	4.78	---	3.11	46.57	35.97	8.23	---	---	---
22	---	---	---	5.02	---	3.55	44.66	40.86	8.35	---	---	---
23	---	---	---	5.26	2.52	3.88	44.23	42.97	8.41	---	---	---
24	---	---	---	5.48	3.16	4.17	44.20	44.49	8.49	---	---	---
25	---	---	---	5.69	3.16	4.47	39.79	43.24	8.68	---	---	---
26	---	---	---	5.86	---	4.72	22.75	18.24	8.76	---	---	---
27	---	---	---	6.01	---	4.97	15.04	10.43	8.82	---	---	---
28	---	---	---	6.48	---	25.26	11.09	10.06	8.86	---	---	---
29	---	---	---	7.09	---	25.26	9.98	9.89	8.92	---	---	---
30	---	---	---	7.43	---	15.89	9.66	9.82	8.95	---	---	---
31	---	---	---	7.59	---	12.77	---	9.81	---	---	---	---
MAX	---	---	---	---	---	---	46.91	44.49	9.89	---	---	---
MIN	---	---	---	---	---	---	8.03	8.83	7.84	---	---	---



HARDIN COUNTY

373925085540301. Local number GW-6, map number 8.

LOCATION.--Lat 37°39'25", long 85°54'03", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, from road U.S 62, 1.8 miles south on Gaither Station Road, 100 ft south on gravel road, 70 ft west of railroad tracks, 150 ft east of Gaither Spring. Owner: City of Elizabethtown.

AQUIFER.--St. Genevieve Limestone of Late Mississippian age. Aquifer Code: 333SGVV.

WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 12 in, depth 100 ft, with 17 ft of 12 in surface casing.

INSTRUMENTATION.--Digital recorder -- 30-minute punch.

DATUM.--Elevation of land-surface datum is 669.99 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 2.8 ft above land-surface datum.

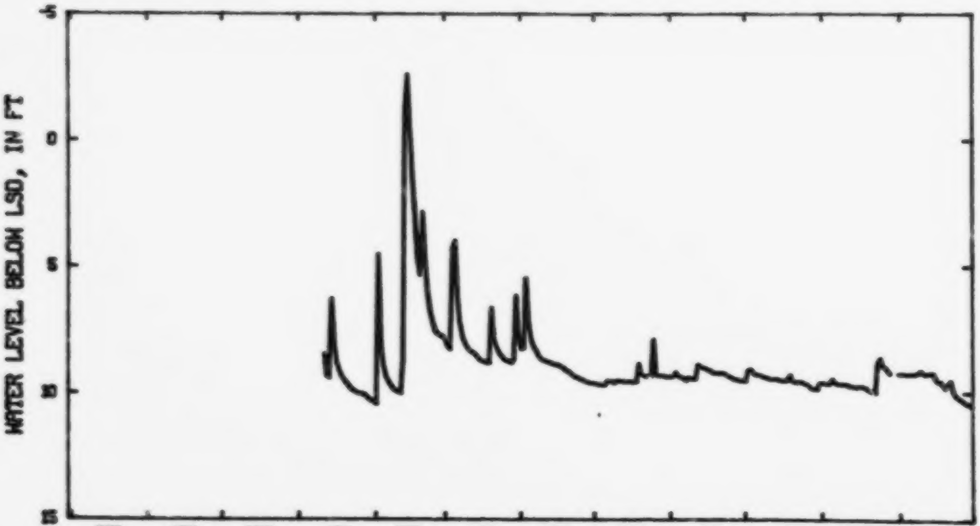
REMARKS.--Water levels affected by stage of nearby Gaither Spring.

PERIOD OF RECORD.--January 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 2.61 ft above land surface datum, Feb. 15, 1989; lowest, 10.48 ft below land-surface datum, Sept. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	10.37	7.79	7.86	9.63	9.36	9.49	9.59	9.24
2	---	---	---	---	10.44	7.86	8.27	9.62	9.34	9.52	9.62	9.25
3	---	---	---	---	4.50	8.14	8.22	9.66	9.34	9.11	9.60	9.23
4	---	---	---	---	7.99	8.28	5.42	9.68	9.15	9.04	9.64	9.26
5	---	---	---	---	8.95	4.26	7.21	9.69	9.31	9.16	9.65	9.28
6	---	---	---	---	9.34	3.96	7.89	9.67	9.36	9.26	9.44	9.24
7	---	---	---	---	9.55	6.22	8.16	9.52	9.40	9.25	9.60	9.26
8	---	---	---	---	9.72	7.26	8.33	9.52	9.49	9.29	9.64	9.25
9	---	---	---	---	9.84	7.77	8.51	9.54	9.37	9.34	9.67	9.21
10	---	---	---	---	9.92	8.03	8.63	9.61	9.43	9.37	9.65	9.11
11	---	---	---	---	9.95	8.20	8.71	9.50	9.43	9.40	9.65	9.21
12	---	---	---	8.42	10.02	8.33	8.73	9.52	9.41	9.45	9.68	9.28
13	---	---	---	9.31	8.75	8.39	8.78	9.54	8.86	9.45	9.74	9.23
14	---	---	---	9.40	+1.21	8.45	8.82	9.56	8.94	9.42	9.74	9.22
15	---	---	---	6.26	+2.61	8.55	8.86	9.54	8.99	9.43	9.77	9.21
16	---	---	---	8.01	+.37	8.68	8.89	9.55	9.02	9.50	9.77	9.43
17	---	---	---	8.81	1.52	8.73	8.90	9.57	9.09	9.47	9.73	9.55
18	---	---	---	9.10	2.92	8.77	8.95	9.55	9.10	9.54	9.73	9.53
19	---	---	---	9.34	4.68	8.83	9.00	9.53	9.19	9.47	9.79	9.69
20	---	---	---	9.48	5.33	8.80	9.09	8.84	9.21	9.28	9.85	9.81
21	---	---	---	9.61	2.82	6.62	9.14	9.24	9.17	9.53	9.92	9.68
22	---	---	---	9.73	4.64	7.91	9.21	9.30	9.23	9.55	9.95	9.51
23	---	---	---	9.85	6.07	8.21	9.29	9.34	9.17	9.59	9.99	9.91
24	---	---	---	9.92	6.76	8.42	9.36	9.35	9.24	9.53	8.81	10.09
25	---	---	---	9.99	7.22	8.54	9.40	9.33	9.31	9.57	8.61	10.17
26	---	---	---	10.02	7.54	8.66	9.46	7.88	9.36	9.63	8.96	10.25
27	---	---	---	10.02	7.67	8.73	9.48	9.28	9.42	9.65	8.99	10.31
28	---	---	---	10.06	7.71	8.76	9.55	9.32	9.46	9.75	9.13	10.39
29	---	---	---	10.14	---	8.83	9.56	9.32	9.46	9.82	9.24	10.44
30	---	---	---	10.25	---	8.67	9.60	9.29	9.51	9.81	---	10.48
31	---	---	---	10.30	---	6.14	---	9.36	---	9.85	---	---
MAX	---	---	---	---	10.44	8.83	9.60	9.69	9.51	9.85	---	10.48
MIN	---	---	---	---	+2.61	3.96	5.42	7.88	8.86	9.04	---	9.11



HARDIN COUNTY

374020085530601. Local number OW-5, map number 8.

LOCATION.--Lat 37°40'35", long 85°52'54", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, 0.30 mi west of Elizabethtown Water Plant, 0.30 mi west on gravel road to sewage lagoon parallel to RR tracks, 850 ft south of RR tracks, 100 ft northwest of Valley Creek, 50 ft southeast of abandoned sewage lagoon. Owner: City of Elizabethtown.

AQUIFER.--St. Genevieve Limestone of Late Mississippian age. Aquifer Code: 333SGVV.

WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 6 in, depth 140 ft, with 36 ft of 6 in surface casing.

INSTRUMENTATION.--Digital recorder -- 30-minute punch.

DATUM.--Elevation of land-surface datum is 685.53 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 3.0 ft above land-surface datum.

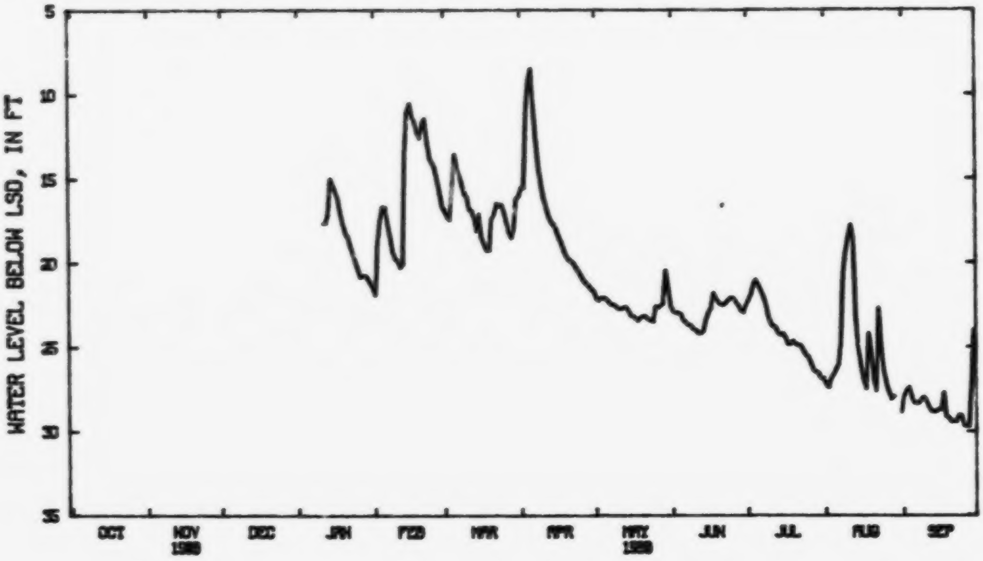
REMARKS.--Water levels affected by stage of nearby Valley Creek.

PERIOD OF RECORD.--January 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 8.48 ft below land surface datum, Apr. 6, 1989; lowest, 29.72 ft below land-surface datum, Sept. 27, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	21.48	16.64	16.00	21.73	22.59	22.56	26.87	28.88
2	---	---	---	---	21.90	16.88	15.54	22.11	22.90	22.24	27.18	27.94
3	---	---	---	---	18.81	17.19	15.52	22.25	22.99	21.92	27.38	27.60
4	---	---	---	---	17.49	17.43	11.09	22.09	23.01	21.34	26.87	27.40
5	---	---	---	---	16.68	15.67	9.11	22.08	23.08	21.04	26.64	27.96
6	---	---	---	---	16.72	13.56	8.48	22.18	23.41	21.32	26.33	28.29
7	---	---	---	---	17.64	14.45	10.69	22.33	23.56	21.66	26.03	28.36
8	---	---	---	---	18.48	14.85	12.69	22.51	23.69	22.00	24.67	28.34
9	---	---	---	---	19.35	15.36	14.33	22.49	23.75	22.46	20.73	28.11
10	---	---	---	---	19.76	15.88	15.35	22.62	23.95	23.15	19.34	27.98
11	---	---	---	---	19.89	16.11	16.13	22.73	24.02	23.59	18.49	28.22
12	---	---	---	17.66	20.27	16.80	16.69	22.78	24.20	23.79	17.78	28.54
13	---	---	---	17.62	20.05	16.94	17.23	22.69	24.18	23.87	18.61	28.83
14	---	---	---	17.13	13.53	17.30	17.57	22.66	24.05	24.17	23.36	28.86
15	---	---	---	15.01	10.97	18.08	17.73	22.87	23.38	24.29	25.19	28.81
16	---	---	---	15.43	10.55	17.07	18.02	23.13	22.95	24.21	26.28	28.71
17	---	---	---	15.79	11.34	18.53	18.51	23.21	22.73	24.49	27.00	28.73
18	---	---	---	16.25	11.59	18.92	18.82	23.32	21.83	24.83	27.48	27.72
19	---	---	---	17.02	12.22	19.27	19.27	23.46	22.11	24.86	24.18	29.11
20	---	---	---	17.70	12.58	19.22	19.61	23.28	22.36	24.66	25.32	29.22
21	---	---	---	18.24	11.69	17.37	19.84	23.18	22.48	24.84	27.00	29.43
22	---	---	---	18.48	11.42	17.11	19.95	23.20	22.54	24.92	27.60	29.37
23	---	---	---	19.02	12.78	16.47	20.09	23.36	22.41	24.94	22.71	29.43
24	---	---	---	19.48	13.76	16.61	20.35	23.45	22.24	25.21	25.12	29.04
25	---	---	---	19.99	14.07	16.51	20.59	23.53	22.09	25.44	26.52	29.09
26	---	---	---	20.42	14.34	16.95	20.84	22.60	22.12	25.63	27.25	29.63
27	---	---	---	20.84	15.02	17.53	21.08	22.71	22.32	25.93	27.71	29.72
28	---	---	---	20.77	15.81	18.14	21.26	22.56	22.54	26.35	28.09	29.71
29	---	---	---	20.73	---	18.50	21.39	22.44	22.82	26.49	27.94	27.37
30	---	---	---	20.97	---	17.90	21.60	20.48	22.96	26.56	---	23.95
31	---	---	---	21.22	---	16.18	---	21.58	---	26.85	---	---
MAX	---	---	---	---	21.90	19.27	21.60	23.53	24.20	26.85	---	29.72
MIN	---	---	---	---	10.55	13.56	8.48	20.48	21.83	21.04	---	23.95

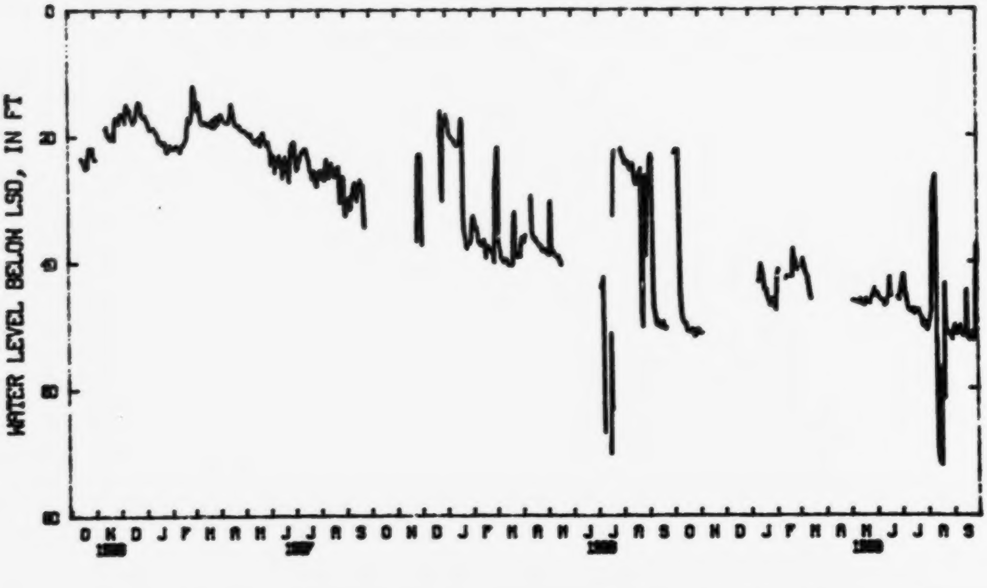


HARDIN COUNTY

374035085525401. Local number OW-1-82, map number 8.
LOCATION.--Lat 37°40'35", long 85°52'54", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, 0.30 mi west of Elizabethtown Water Plant, 0.20 mi west on gravel road to sewage lagoon parallel to RR tracks, 100 ft south of RR tracks, 75 ft east of electric power tower, 10 ft north of gravel road. Owner: City of Elizabethtown.
AQUIFER.--St. Louis Limestone of Late Mississippian age. Aquifer Code: 333STLS.
WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 6 in, depth 120 ft, with 14 ft of 8 in surface casing.
INSTRUMENTATION.--Digital recorder -- 30-minute punch.
DATUM.--Elevation of land-surface datum is 692.25 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 1.4 ft above land-surface datum.
REMARKS.-- Water levels affected by pumping from nearby wells and proximity to RR tracks.
PERIOD OF RECORD.--September 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 8.99 ft below land surface datum, May 3, 1983; lowest, 78.77 ft below land-surface datum, July 14, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	50.79	---	---	47.13	---	---	---	45.29	44.60	50.19	52.32
2	---	51.25	---	---	47.56	---	---	---	45.44	43.90	50.81	50.64
3	22.71	51.24	---	---	44.66	---	---	---	45.17	43.00	50.61	50.19
4	22.28	51.18	---	---	41.71	---	---	46.15	44.84	42.00	49.74	49.87
5	22.05	---	---	---	41.11	40.90	---	46.24	45.28	41.95	49.13	51.10
6	22.21	---	---	---	41.34	39.44	---	46.04	45.64	43.40	48.24	51.53
7	22.55	---	---	---	---	40.11	---	46.04	45.98	45.60	47.89	51.19
8	22.11	---	---	---	---	40.55	---	46.30	46.08	45.10	37.00	50.83
9	32.91	---	---	---	---	41.36	---	46.37	46.06	46.30	29.50	50.35
10	44.64	---	---	---	---	41.92	---	46.27	46.23	47.10	27.97	49.97
11	47.23	---	---	---	---	42.09	---	46.36	46.14	47.66	27.06	50.73
12	48.86	---	---	42.92	---	42.30	---	46.50	46.93	47.53	26.29	51.23
13	49.32	---	46.60	43.20	---	43.40	44.01	46.02	46.47	47.54	36.01	51.60
14	49.62	---	---	42.18	42.74	44.09	---	45.76	46.73	47.89	68.00	51.83
15	49.51	---	---	40.26	42.24	45.18	---	46.31	45.79	47.60	70.90	51.21
16	49.63	---	---	40.76	42.23	45.84	---	46.68	45.61	47.31	71.70	51.14
17	50.07	---	---	41.43	42.25	---	---	46.59	45.24	48.01	71.90	51.30
18	50.84	---	---	42.07	42.29	---	---	46.81	42.34	48.33	72.12	44.40
19	50.73	---	---	43.35	42.24	---	---	46.91	44.70	48.01	56.50	52.07
20	50.78	---	---	44.45	42.20	---	---	45.97	45.35	47.46	61.75	52.07
21	51.06	---	---	44.21	42.25	---	---	45.78	---	47.90	61.51	52.43
22	50.64	---	---	44.36	42.24	---	---	46.15	---	47.71	61.49	52.17
23	50.49	---	---	45.46	37.85	---	---	46.37	---	47.57	43.31	51.56
24	50.64	---	---	45.84	39.40	---	---	46.39	---	48.30	48.93	51.06
25	50.84	---	---	46.26	39.56	---	---	46.53	---	48.58	50.65	51.47
26	51.36	---	---	46.87	39.96	---	---	46.06	---	48.77	51.04	52.41
27	51.80	---	---	46.92	40.86	---	---	45.66	45.50	49.15	51.45	52.24
28	51.47	---	---	46.18	41.30	---	---	45.27	45.60	50.12	51.59	52.20
29	50.65	---	---	45.71	---	---	---	44.87	46.00	49.75	51.20	43.37
30	50.48	---	---	46.63	---	---	---	44.48	46.01	49.38	51.74	37.02
31	50.56	---	---	46.85	---	---	---	44.09	---	50.42	51.92	---
MAX	---	---	---	---	---	---	---	---	---	50.42	72.12	52.43
MIN	---	---	---	---	---	---	---	---	---	41.95	26.29	37.02



HARDIN COUNTY

374037085524801. Local number TW-2-82, map number 8.

LOCATION.--Lat 37°40'37", long 85°52'48", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, 0.20 mi west of Elizabethtown Water Plant, 0.10 mi west on gravel road to sewage lagoon parallel to RR tracks, 400 ft south of RR tracks, 300 ft south of gravel road, 20 ft north of Valley Creek. Owner: City of Elizabethtown.

AQUIFER.--St. Louis Limestone of Late Mississippian age. Aquifer Code: 333STLS.

WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 6 in, depth 118 ft, with 14 ft of 8 in surface casing.

INSTRUMENTATION.--Digital recorder -- 30-minute punch.

DATUM.--Elevation of land-surface datum is 680.84 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 2.2 ft above land-surface datum.

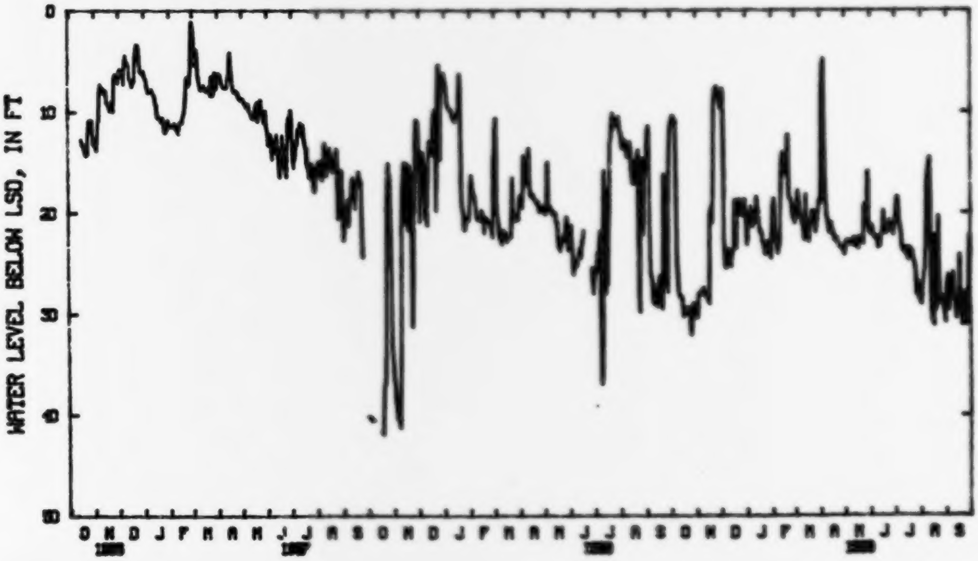
REMARKS.--Water levels affected by pumping from nearby wells and stage of Valley Creek.

PERIOD OF RECORD.--September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 0.74 ft below land surface datum, Mar. 1, 1987; lowest, 41.96 ft below land-surface datum, Oct. 20, 1987.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.82	29.32	8.89	18.65	24.21	20.64	18.77	23.60	21.95	20.78	27.81	30.81
2	11.22	30.39	9.62	19.79	24.52	20.77	18.52	24.11	22.04	20.31	28.89	27.20
3	10.85	30.39	7.91	20.86	21.50	21.07	19.00	23.47	21.61	19.35	29.04	26.57
4	10.54	29.98	7.73	23.22	19.16	20.62	8.86	22.82	21.17	18.40	27.96	26.08
5	10.38	28.01	8.11	22.73	18.61	18.87	5.48	23.01	21.44	18.51	26.82	28.75
6	10.76	27.94	13.02	21.35	19.33	17.78	4.76	22.67	22.10	19.77	25.70	29.63
7	11.06	27.88	22.57	20.98	21.43	18.41	11.89	22.71	22.43	21.64	25.39	28.12
8	10.81	27.97	24.50	19.33	22.57	18.85	16.88	23.18	22.51	21.12	22.14	27.48
9	16.61	27.92	25.48	19.67	23.51	19.65	18.60	23.04	22.31	21.82	16.89	26.62
10	24.62	27.54	24.10	20.94	24.01	20.53	20.07	22.96	22.59	23.15	15.80	25.81
11	26.17	28.06	24.15	21.41	23.50	20.56	20.66	23.01	22.54	23.68	15.10	27.46
12	27.81	27.45	23.59	20.80	23.21	21.17	21.10	23.21	23.46	23.56	14.51	28.40
13	28.25	27.89	23.81	21.03	22.53	21.21	21.64	22.48	22.76	23.53	18.64	29.55
14	28.45	28.35	24.84	20.36	16.76	21.81	21.98	22.40	23.25	24.00	25.55	30.37
15	28.23	27.91	25.32	18.39	14.28	22.66	20.98	22.94	22.08	23.82	29.52	28.12
16	28.31	28.28	24.30	18.95	14.01	18.20	20.96	23.28	22.11	23.38	30.62	28.52
17	28.95	28.57	23.92	19.67	14.87	21.72	21.77	23.11	21.80	24.12	30.78	28.98
18	30.34	28.96	23.69	19.99	14.96	22.34	21.70	23.35	19.74	24.61	31.08	24.06
19	29.78	24.90	23.10	21.22	15.51	22.43	22.32	23.54	21.66	24.20	22.10	29.80
20	29.87	19.84	18.73	22.02	16.27	22.86	22.61	22.35	21.93	23.41	27.63	29.99
21	30.07	19.60	22.91	21.71	15.69	21.17	22.80	22.35	22.09	24.01	29.65	31.03
22	29.37	19.31	23.53	21.99	12.21	20.92	22.50	22.75	21.83	23.82	29.04	30.59
23	29.39	21.05	21.57	22.87	17.17	19.84	22.46	22.94	21.59	23.76	20.28	27.82
24	29.47	9.83	19.12	23.10	18.63	20.03	22.85	22.97	21.29	24.64	26.00	27.68
25	29.96	7.78	18.65	23.51	18.60	19.78	23.06	23.07	20.74	24.91	27.25	28.80
26	30.38	7.87	19.11	24.13	18.72	20.61	23.28	19.10	21.18	25.23	28.44	31.07
27	32.09	7.44	19.74	23.73	19.14	21.56	23.40	20.95	21.53	25.98	28.43	30.40
28	30.51	7.61	19.93	23.36	20.28	21.96	23.51	19.71	21.52	28.07	29.12	30.31
29	29.07	8.12	20.34	22.83	---	21.65	23.29	20.56	21.98	27.16	28.20	24.35
30	28.92	8.48	19.62	23.76	---	20.70	23.19	15.83	22.17	26.80	29.60	22.06
31	29.15	---	18.69	23.94	---	19.65	---	20.63	---	28.54	30.16	---
MAX	32.09	30.39	25.48	24.13	24.52	22.86	23.51	24.11	23.46	28.54	31.08	31.07
MIN	10.38	7.44	7.73	18.39	12.21	17.78	4.76	15.83	19.74	18.40	14.51	22.06



HARDIN COUNTY

374046085523501. Local number OW-1-81, map number 8.

LOCATION.--Lat 37°40'46", long 85°52'35", Hydrologic Unit 05110001, County Code 093, Cecilia quadrangle, at Elizabethtown Water Plant, 300 ft south of blue water tank, 25 ft east of engineer's office, next to gravel driveway. Owner: City of Elizabethtown.

AQUIFER.--St. Louis Limestone of Late Mississippian age. Aquifer Code: 333STLS.

WELL CHARACTERISTICS.--Drilled unused artesian and water table well, diameter 6 in, depth 100 ft, with 6 ft of 6 in surface casing.

INSTRUMENTATION.--Digital recorder -- 30-minute punch.

DATUM.--Elevation of land-surface datum is 685.89 ft above National Geodetic Vertical Datum. Measuring point: Floor of shelter, 1.9 ft above land-surface datum.

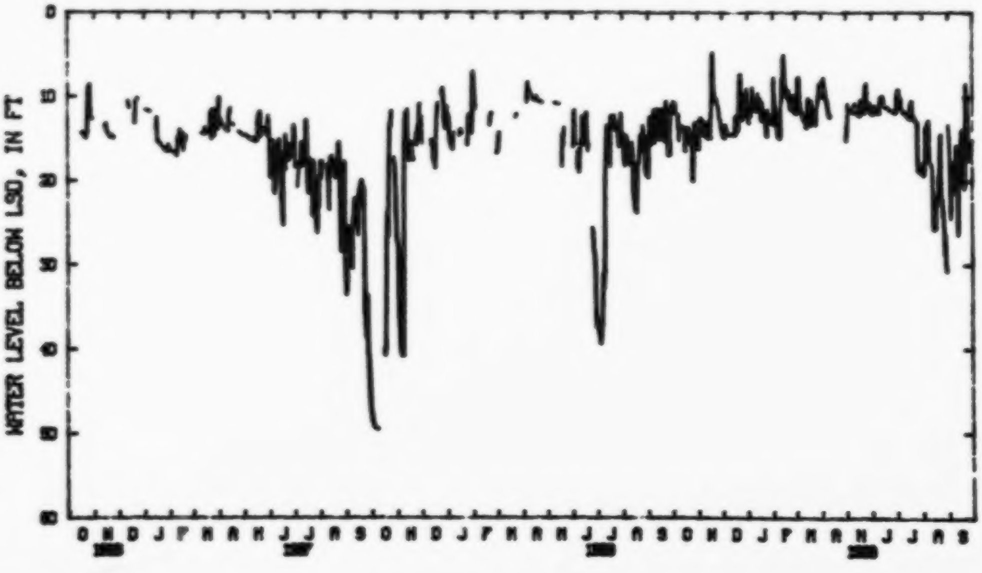
REMARKS.--Water levels affected by pumping from nearby wells.

PERIOD OF RECORD.--September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 4.74 ft below land surface datum, Nov. 20, 1988; lowest, 49.47 ft below land-surface datum, Oct. 8, 1987.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.82	13.35	13.55	9.00	13.19	11.96	9.28	15.06	11.92	11.91	17.98	---
2	10.57	16.24	14.47	12.28	13.29	11.95	9.88	15.21	12.01	11.78	18.48	13.28
3	10.68	16.20	14.48	12.71	7.70	12.01	9.79	14.04	12.07	9.82	18.61	14.74
4	10.71	13.72	14.72	13.11	10.39	10.53	7.73	10.77	11.54	9.08	19.36	17.26
5	10.77	12.46	14.88	11.53	11.01	7.63	8.71	11.71	10.95	10.04	19.11	24.40
6	11.95	14.04	13.23	11.55	11.94	9.19	9.40	11.63	11.71	11.05	13.39	21.28
7	12.06	14.00	13.83	12.31	12.85	10.42	10.18	11.84	11.87	10.12	15.35	21.28
8	11.97	12.63	14.17	8.83	13.87	11.13	10.25	11.84	11.92	11.36	15.08	21.01
9	12.15	14.58	14.49	9.97	14.64	11.66	10.77	11.26	11.11	11.53	12.77	21.15
10	15.20	12.94	14.40	10.89	14.92	12.13	11.37	11.55	11.52	11.77	14.67	17.41
11	13.07	14.58	14.47	11.41	14.61	12.55	12.10	11.79	11.70	11.94	17.65	18.56
12	13.53	14.63	14.47	10.90	11.35	12.83	12.41	11.87	11.90	11.71	17.97	15.69
13	13.52	14.73	14.47	11.77	10.50	12.37	12.18	10.73	9.91	11.84	17.99	22.85
14	13.60	14.92	14.51	11.62	7.22	13.00	---	11.90	9.93	12.10	18.67	26.35
15	13.42	12.82	14.59	9.47	5.02	13.67	---	11.76	9.83	12.23	25.56	18.02
16	13.60	12.86	14.51	10.49	7.30	11.63	---	12.01	10.35	12.28	25.73	19.27
17	13.63	12.96	14.50	11.20	8.69	10.07	---	12.13	10.91	12.49	25.12	19.39
18	16.45	14.94	14.47	10.14	9.08	12.00	---	12.20	11.07	12.63	25.60	15.84
19	13.93	7.26	12.16	12.56	9.77	12.61	---	12.18	11.20	11.01	21.74	13.80
20	13.94	4.74	14.18	12.88	10.16	13.36	---	10.25	11.08	10.48	22.16	18.24
21	13.56	8.78	12.64	10.66	9.19	10.39	---	11.62	11.08	12.06	22.52	20.96
22	13.62	9.71	13.84	12.40	9.88	11.36	---	11.84	11.30	12.26	18.42	20.36
23	15.24	10.63	10.59	12.69	10.92	12.08	---	11.91	11.40	12.46	17.65	8.39
24	15.10	10.09	7.24	12.75	11.46	12.36	---	11.94	11.54	12.73	14.40	10.83
25	15.83	10.24	9.20	12.88	11.53	12.70	---	11.85	11.60	12.87	22.69	9.81
26	14.25	10.83	10.03	14.69	11.28	13.30	---	8.35	11.66	12.99	22.14	15.06
27	19.96	11.05	12.85	11.42	9.76	12.19	---	10.24	11.62	13.08	23.80	17.57
28	15.06	11.86	10.85	12.91	11.61	10.95	---	11.35	11.68	18.73	26.29	17.25
29	13.03	12.70	11.96	12.79	---	10.28	---	11.58	11.78	18.38	26.32	16.31
30	13.01	12.71	12.27	13.02	---	9.12	---	10.65	11.93	18.54	29.74	15.22
31	13.17	---	10.55	13.10	---	8.37	---	10.66	---	18.96	30.66	---
MAX	19.96	16.24	14.88	14.69	14.92	13.67	---	15.21	12.07	18.96	30.66	---
MIN	10.57	4.74	7.24	8.83	5.02	7.63	---	8.35	9.83	9.08	12.77	---



HARDIN COUNTY

375958085575401. Local number, Hart number 1, map number 9.
LOCATION.--Lat 37°59'58", long 85°57'54", Hydrologic Unit 05140104, County Code 093, Ft. Knox quadrangle, 1.4 mi north of junction of U.S. Highway 31W and Kentucky State Highway 835, 1.1 mi downstream (west) of mouth of Salt River, on south bank of Ohio River, at West Point. Owner: Mr. Hart.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 100 ft, screened 97.3-100.3 ft.
INSTRUMENTATION.--Bi-Annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 429.61 ft, above National Geodetic Vertical Datum. Measuring point: Top of casing 3.27 ft above land-surface datum.
REMARKS.--Water levels affected by Ohio River.
PERIOD OF RECORD.--November 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.99 ft below land-surface datum, May 2, 1983; lowest measured, 46.39 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	46.39	Apr. 25, 1989	39.60

HENDERSON COUNTY

374441087421001. Map number 10.
LOCATION.--Lat 37°44'41", long 87°42'10", Hydrologic Unit 05140202, County Code 101, Poole quadrangle, in a vacant lot, 30 ft north of a gravel street, 100 ft south of U.S. Highway 60, near the center of Corydon. Owner: Town of Corydon.
AQUIFER.--Sturgis Formation of Late Pennsylvanian and early Permian age. Aquifer code: 321STRG. (Previously published as Lisman Formation of Late Pennsylvanian age. Aquifer Code: 321LSMN).
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in, depth 157 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 435 ft. Measuring point: Floor of recorder shelter, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--March 1952 to August 1983 and June 1988 to current year. March 1952 to September 1976 pubished in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.82 ft below land-surface datum, July 29, 1976; lowest measured, 119.83 ft below land-surface datum, Nov. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, JUNE 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Jun. 27, 1988	65.50	Jan. 26, 1989	66.43	Jul. 26	65.62
Jul. 11	66.51	Mar. 21	66.00	Sept. 6	65.20
Nov. 14	66.46	May 12	65.26		
Dec. 21	66.70	Jun. 21	65.04		

JEFFERSON COUNTY

380122085545001. Local number 80-1, map number 1.
LOCATION.--Lat 38°01'22", long 85°54'50", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, 12 ft west of an old private driveway, 40 ft north of Kentucky Highway 44, 0.25 mi southeast of junction of U.S. Highway 31W and Kentucky Highway 44, 0.9 mi southwest of Kosmosdale. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 100 ft, screened 93.0-95.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 431.64 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--May 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.74 ft below land-surface datum, Apr. 30, 1984; lowest measured, 42.66 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	42.66	Apr. 25, 1989	31.42

380252085530601. Local number 79-3, map number 2.
LOCATION.--Lat 38°02'52", long 85°53'06", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, on the south side of the first building inside the gate at Old Boone Distillery, at the south end of Bohannon Avenue, 0.9 mi south of Pendleton Road, 1.5 mi northeast of Kosmosdale. Owner: Ronald Clark.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled used water-table well, diameter 12 in, depth 90 ft cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 440.75 ft above National Geodetic Vertical Datum. Measuring point: Top of metal well cover, 0.70 ft above land-surface datum.
REMARKS.--Water levels affected by pumping.
PERIOD OF RECORD.--March 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.21 ft below land-surface datum, May 24, 1979; lowest measured, 40.75 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	40.75	Apr. 25, 1989	35.32

380308085533501. Local number 79-4, map number 3.
LOCATION.--Lat 38°03'08", long 85°53'35", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, at 14045 Richie Lane, between farmhouse and fishing lake, 400 ft east of Dixie Highway, and 1.4 mi northeast of Kosmosdale. Owner: Chesley Wix.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled used water-table well, diameter 6 in, depth 83 ft, screened 73-83 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 440.74 ft above National Geodetic Vertical Datum. Measuring point: Top of metal well cover, 2.00 ft above land-surface datum.
REMARKS.--Water levels affected by pumping.
PERIOD OF RECORD.--March 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.09 ft below land-surface datum, Apr. 16, 1980; lowest measured, 43.15 ft below land-surface datum, June 15, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	41.90	Apr. 25, 1989	38.25

JEFFERSON COUNTY

380341085534501. Local number 83-1, map number 4.
LOCATION.--Lat 38°03'41", long 85°53'45", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, across street from 135111 Wilken Way, at east edge of Watson Lane Elementary School playground, 8 ft west of blacktop pavement, 9 ft east of a powerline pole, 2 mi north of Kosmosdale, in Meadow Lawn subdivision. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 64 ft, screened 62-64 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 441.25 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--March 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.31 ft below land-surface datum, Apr. 22, 1985; lowest measured, 44.68 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	44.68	Apr. 25, 1989	39.39

380423085541501. Local number, Genewien number 2, map number 5.
LOCATION.--Lat 38°04'23", long 85°54'15", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, 31 ft south of Louisville Gas & Electric power line pole number 47, 33 ft west of center line of Cane Run Road, 0.7 mi south of Orell Road, 1.5 mi north of Louisville Gas & Electric Mill Creek Generating Plant, 2.5 mi north of Kosmosdale. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 65 ft, screened 63-65 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 431.49 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.42 ft below land-surface datum, Apr. 30, 1984; lowest measured, 44.32 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	44.32	Apr. 25, 1989	34.10

380434085525101. Local number E-1-d, map number 6.
LOCATION.--Lat 38°04'34", long 85°52'51", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, 7 ft east of the east bank of a drainage ditch, 18 ft west of a fence, 39 ft south of a cable gate, 200 ft west of Old Orell Road, 400 ft south of Old Dixie Highway in Valley Station. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 74.5 ft, screened 75-78 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 430.39 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.
REMARKS.--EPA, Mill Creek EIS test well.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.82 ft below land-surface datum, Oct. 29, 1980; lowest measured, 27.13 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	27.13	Apr. 25, 1989	25.07

JEFFERSON COUNTY

380517085535201. Local number 77-1, map number 7.
LOCATION.--Lat 38°05'17", long 85°53'52", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, the north edge of gravel entrance road to southwest Jefferson County sewage pumping station, 125 ft east of the center line of Lower River Road, 0.4 mi north of Orell Road, 0.2 mi east of Ohio River, and 1.5 mi southwest of Valley Station. Owner: Metropolitan Sewer District.
AQUIFER --Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 83.2 ft, screened 80.2-83.2 ft.
INSTRUMENTATAION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 444.96 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.00 ft above land-surface datum.
PERIOD OF RECORD.--October 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.81 ft below land-surface datum, Apr. 30, 1984; lowest measured, 57.75 ft below land-surface datum, Nov. 10, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 27, 1988	55.64	Apr. 25, 1989	45.90

380532085515301. Local number 51-5-2, (76-1), map number 8.
LOCATION.--Lat 38°05'32", long 85°51'53", Hydrologic Unit 05140102, County Code 111, Valley Station quadrangle, in back yard at 11212 Deering Road in Valley Station. Owner: Curtis Ashcraft (formerly David Finn).
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 88 ft, screened 85-88 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 458.24 ft above National Geodetic Vertical Datum. Measuring point: Base of shelter, 2.69 ft above land-surface datum. After May 15, 1978, measuring point: Top of casing, 0.30 ft above land-surface datum.
REMARKS.--Water-level elevations previously published referenced to National Geodetic Vertical Datum.
PERIOD OF RECORD.--May 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.03 ft below land-surface datum, June 24, 1980; lowest measured, 46.73 ft above land-surface datum, Oct. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	46.06	Apr. 26, 1989	45.53

JEFFERSON COUNTY

380606085531301. Local number 53-6-1, (RR-46), map number 9.

LOCATION.--Lat 38°06'06", long 85°53'13", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, at entrance to Sun Valley Park, 20 ft south of Bethany Lane, 0.2 mi east of Lower River Road, in Valley Station. Owner: Jefferson County.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 92 ft, screened 88-90 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

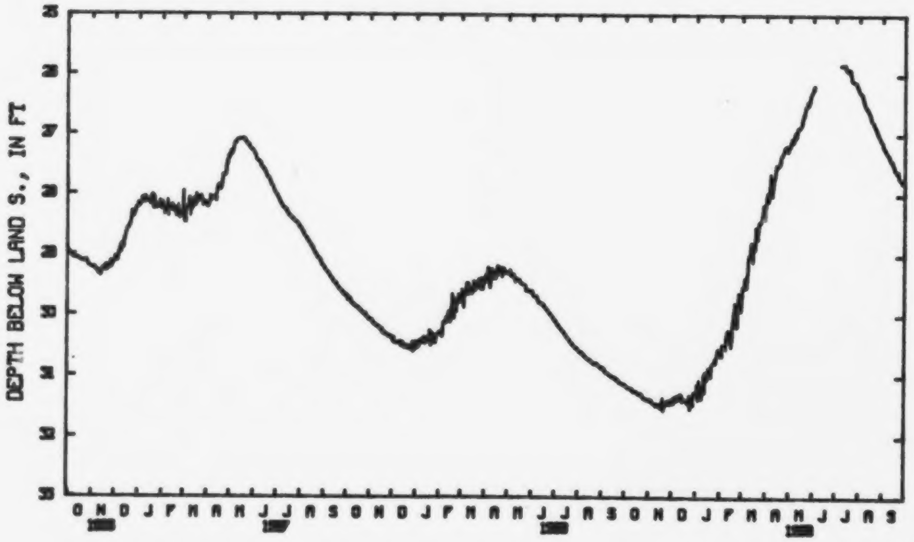
DATUM.--Elevation of land-surface datum is 433.89 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 2.93 ft above land-surface datum.

PERIOD OF RECORD.--July 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.14 ft below land-surface datum, May 19, 1975; lowest, 40.87 ft below land-surface datum, Feb. 19, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

1	31.13	31.37	31.41	31.30	30.55	29.93	28.41	27.18	26.26	---	26.26	27.12
2	31.14	31.40	31.44	31.31	30.67	29.69	28.22	27.17	26.23	---	26.29	27.18
3	31.16	31.39	31.36	31.13	30.67	29.52	28.03	27.19	26.18	---	26.30	27.21
4	31.17	31.38	31.44	31.40	30.67	29.55	27.97	27.12	---	---	26.31	27.22
5	31.19	31.38	31.35	31.20	30.47	29.53	28.11	27.06	---	---	26.33	27.25
6	31.20	31.42	31.33	31.07	30.51	29.38	28.04	27.11	---	---	26.36	27.27
7	31.20	31.45	31.33	31.23	30.49	29.54	27.88	27.13	---	---	26.43	27.30
8	31.20	31.46	31.40	31.38	30.48	29.53	27.65	27.07	---	25.83	26.47	27.32
9	31.19	31.45	31.36	31.36	30.56	29.40	27.96	26.96	---	25.83	26.51	27.33
10	31.20	31.44	31.31	31.15	30.33	29.22	28.02	27.05	---	25.84	26.53	27.36
11	31.21	31.49	31.37	31.15	30.26	28.99	27.89	27.02	---	25.85	26.55	27.40
12	31.24	31.44	31.36	30.97	30.43	29.04	27.74	26.93	---	25.84	26.57	27.42
13	31.26	31.48	31.29	31.27	30.24	28.92	27.69	26.88	---	25.82	26.59	27.44
14	31.24	31.49	31.31	30.92	30.35	28.79	27.62	26.89	---	25.87	26.62	27.43
15	31.25	31.48	31.42	30.95	30.33	28.97	27.51	26.87	---	25.92	26.64	27.50
16	31.25	31.45	31.39	31.05	30.52	29.11	27.55	26.86	---	25.91	26.67	27.51
17	31.26	31.52	31.36	30.95	30.41	28.84	27.51	26.84	---	25.93	26.73	27.57
18	31.28	31.51	31.39	30.86	30.14	28.80	27.49	26.79	---	25.94	26.77	27.59
19	31.29	31.46	31.38	30.95	30.00	28.90	27.50	26.72	---	25.90	26.78	27.60
20	31.30	31.36	31.39	30.93	29.95	28.53	27.46	26.65	---	25.91	26.79	27.63
21	31.28	31.57	31.45	31.01	29.79	28.65	27.36	26.68	---	25.99	26.84	27.64
22	31.31	31.49	31.43	30.82	30.08	28.73	27.34	26.57	---	26.07	26.86	27.60
23	31.28	31.46	31.43	30.79	30.20	28.56	27.31	26.52	---	26.10	26.88	27.71
24	31.32	31.45	31.31	30.78	30.17	28.47	27.30	26.52	---	26.09	26.91	27.74
25	31.34	31.44	31.55	30.78	29.87	28.44	27.26	26.44	---	26.11	26.94	27.72
26	31.36	31.39	31.46	30.72	29.62	28.46	27.21	26.45	---	26.12	26.98	27.74
27	31.36	31.44	31.32	30.79	29.75	28.42	27.21	26.50	---	26.12	27.01	27.80
28	31.38	31.46	31.46	30.69	29.80	28.36	27.18	26.43	---	26.12	27.04	27.79
29	31.39	31.46	31.47	30.62	---	28.30	27.19	26.35	---	26.17	27.06	27.79
30	31.38	31.38	31.25	30.56	---	28.17	27.28	26.31	---	26.18	27.09	27.80
31	31.37	---	31.29	30.57	---	28.26	---	26.29	---	26.22	27.11	---
MAX	31.39	31.57	31.55	31.40	30.67	29.93	28.41	27.19	---	---	27.11	27.80
MIN	31.13	31.36	31.25	30.56	29.62	28.17	27.18	26.29	---	---	26.26	27.12



JEFFERSON COUNTY

380616085532801. Local number 53-6-4, (TW-3), map number 10.

LOCATION.--Lat 38°06'16", long 85°53'28", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, at the old Louisville Extension Water District Treatment Plant, 500 ft northwest of the junction of Lower River Road and Bethany Lane, in Louisville. Owner: Louisville Water Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2 in, depth 120 ft, screened 118-120 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 448.21 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1962 to current year. March 1962 to September 1976 published in hydrograph form and on file at district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.97 ft below land-surface datum, May 22, 1975; lowest measured, 71.21 ft below land-surface datum, Nov. 10, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	47.43	Apr. 25, 1989	42.39

380637085521301. Local number D-1-d, map number 11.

LOCATION.--Lat 38°06'37", long 85°52'13", Hydrologic Unit 05140101, County Code 111, Valley Station quadrangle, 6 ft east of the east bank of 600 Tributary Creek, 14 ft west of a chain link fence, 30 ft south of a locked cable gate, 190 ft south of Alanadale Drive at a concrete bridge in Louisville. Owner: Metropolitan Sewer District.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth unknown, cased and screened.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 441.1 ft above National Geodetic Vertical Datum. Measuring point: Top of edge of metal well cover, at land-surface datum.

REMARKS.--EPA, Mill Creek EIS test well.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.39 ft below land-surface datum, Oct. 29, 1980; lowest measured, 27.32 ft below land-surface datum, Oct. 27, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 27, 1988	27.32	Apr. 26, 1989	26.83

JEFFERSON COUNTY

380709085531101. Local number C-5-d, map number 13.
LOCATION.--Lat 38°07'09", long 85°53'11", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, 3 ft west of a gravel field road, 20 ft west of west bank of Mill Creek, 50 ft southeast of two large oak trees, 550 ft northwest of Johnsontown Road, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 81.0 ft, screened 78-81 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 427.1 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.
REMARKS.--EPA, Mill Creek EIS test well.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.83 ft below land-surface datum, Oct. 29, 1980; lowest measured, 19.95 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	19.95	Apr. 25, 1989	17.55

380716085521801. Local number 52-7-2, (RR-47), map number 15.
LOCATION.--Lat 38°07'16", long 85°52'18", Hydrologic Unit 05140101, County Code 111, Valley Station quadrangle, at 5510 Johnsontown Road, 0.9 mi west of junction of Dixie Highway and Johnsontown Road, on the south shoulder of Johnsontown Road, in Valley Station. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 103 ft, screened 101.5-103.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 449.91 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.50 ft above land-surface datum.
PERIOD OF RECORD.--July 1945 to current year. July 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.56 ft below land-surface datum, Apr. 16, 1980; lowest measured, 42.20 ft below land-surface datum, Mar. 27, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	35.49	Apr. 26, 1989	34.93

JEFFERSON COUNTY

380718085515802. Local number C-3-s, map number 16.

LOCATION.--Lat 38°07'18", long 85°51'58", Hydrologic Unit 05140101, County Code 111, Valley Station quadrangle, 6 ft west of west bank of 600 Tributary Creek, 30 ft of the southeast corner of a chain link fence dog pen, 160 ft north of Johnsontown Road at a concrete bridge, in Louisville. Owner: Metropolitan Sewer District.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 39.0 ft, screened 36-39 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 443.2 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.

REMARKS.--EPA, Mill Creek EIS test well. Replaces well 380718085515801 (C-3-d).

PERIOD OF RECORD.--April 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.38 ft. below land-surface datum, Apr. 23, 1985; lowest measured, 27.39 below land-surface datum, Apr. 26, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	27.36	Apr. 26, 1989	27.39

380718085524202. Local number C-4-m, map number 17.

LOCATION.--Lat 38°07'18", long 85°52'42", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, 10 ft west of a gravel field road, 65 ft north of a metal gate, 72 ft south of a concrete culvert, 115 ft east of east bank of Black Pond Creek, 126 ft north of Johnsontown Road, in Louisville. Owner: Metropolitan Sewer District.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 49.2 ft, screened 46.2-49.2 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 432.1 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.

REMARKS.--EPA, Mill Creek EIS test well. Replaces destroyed well 380718085524201 (C-4-d).

PERIOD OF RECORD.--November 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.24 ft below land-surface datum, Oct. 29, 1980; lowest measured, 20.61 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	20.61	Apr. 26, 1989	19.62

380816085520701. Local number 52-8-1, map number 19.

LOCATION.--Lat 38°08'16", long 85°52'07", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, between the house and a tool shed at a vegetable farm, 0.5 mi south of Greenwood Road, 0.1 mi west of Canna Road, in Louisville. Owner: Anna Dohn.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 30 in, depth 70 ft, shored.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 457.47 ft above National Geodetic Vertical Datum. Measuring point: Top of wooden well cover, 0.62 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby well.

PERIOD OF RECORD.--November 1943 to current year. November 1943 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.13 ft below land-surface datum, Oct. 27, 1980; lowest measured, 51.20 ft below land-surface datum, Feb. 10, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	41.08	Apr. 26, 1989	40.90

JEFFERSON COUNTY

380843085530701. Local number B-3-d, map number 20.
LOCATION.--Lat 38°08'43", long 85°53'07", Hydrologic Unit 05140101, County Code 111, Lanesville quadrangle, in a field 60 ft east of southeast corner of church yard fence, 200 ft southeast of Greenwood Road, 300 ft west of Mill Creek, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth unknown, screened interval unknown.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 424.9 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.
REMARKS.--EPA, Mill Creek EIS test well.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.78 ft below land-surface datum, Oct. 29, 1980; lowest measured, 18.69 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	18.69	Apr. 26, 1989	16.75

380843085522801. Local number B-2-d, map number 21.
LOCATION.--Lat 38°08'43", long 85°52'28", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 6 ft west of west bank of Pond Creek, 75 ft north of Greenwood Road at bridge over Black Pond Creek, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 95.3 ft, screened 94-97.
INSTRUMENTATION.--Bi-annual measurment with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 443.4 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.
REMARKS.--EPA, Mill Creek EIS test well.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.01 ft below land-surface datum, Oct. 29, 1980; lowest measured, 29.40 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	29.40	Apr. 26, 1989	29.36

380846085520101. Local number B-1-d, map number 22.
LOCATION.--Lat 38°08'46", long 85°52'01", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 10 ft south of south bank of a drainage ditch, 75 ft west of Waller Lane, 650 ft north of junction of Waller Lane and Greenwood Road, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 83.7 ft, screened 81-84 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 451.3 ft above National Geodetic Vertical Datum. Measuring point: Top edge of metal well cover, at land-surface datum.
REMARKS.--EPA, Mill Creek EIS test well.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.98 ft below land-surface datum, Oct. 29, 1980; lowest measured, 34.78 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	34.78	Apr. 26, 1989	34.45

JEFFERSON COUNTY

380850085534701. Local number 78-2, map number 23.
LOCATION.--Lat 38°08'50", long 85°53'47", Hydrologic Unit 05140101, County Code 111, Lanesville quadrangle, at the southwest corner of Cane Run Road and Greenwood Road, 25 ft west of Cane Run Road, 44 ft south of Greenwood Road, and 0.4 mi east of Ohio River, in Louisville. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 86.6 ft, screened 84.6-86.6 ft.
INSTRUMENTATAION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 450.07 ft above National Geodetic Vertical Datum. Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--May 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.68 ft below land-suface datum, May 2, 1979; lowest measured, 50.62 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	50.62	Apr. 25, 1989	45.45

380852085515901. Local number 51-8-1, map number 24.
LOCATION.--Lat 38°08'52", long 85°51'59", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the rear of a house, 100 ft west of Waller Lane, 0.2 mi north of Greenwood Road, 1.5 mi east of lower River Road, in Louisville. Owner: Mrs. Ethel Waller.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in, depth 50 ft, shored.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 456.75 ft above National Geodetic Vertical Datum. Measuring point: Top of concrete well cover, 0.30 ft above land-surface datum.
REMARKS.--Water-quality samples Apr. 4, 1944 and July 25, 1945.
PERIOD OF RECORD.--November 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.76 ft below land-surface datum, June 24, 1980; lowest measured, 47.48 ft below land-surface datum, Jan. 24, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	40.96	Apr. 26, 1989	39.68

380940085514001. Local number 81-1, map number 25.
LOCATION.--Lat 38°09'40", long 85°51'40", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 7 ft west of a fence corner, 10 ft east of center of a gravel road, 20 ft north of the west bank of Black Pond Creek, 40 ft north of northeast corner of concrete bridge, 400 ft south of Lower Hunters Trace, 1.5 mi west of Dixie Highway, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 70.0 ft, screened 63.0-65.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS annual personnel.
DATUM.--Elevation of land-surface datum is 444.58 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-suface datum.
PERIOD OF RECORD.--April 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.57 ft below land-surface datum, Apr. 26, 1985; lowest measured, 26.40 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	26.40	Apr. 25, 1989	25.68

JEFFERSON COUNTY

380955085531801. Local number 83-2, map number 26.

LOCATION.--Lat 38°09'55", long 85°53'18", Hydrologic Unit 05140101, County Code 111, Lanesville quadrangle, 19 ft northwest of a fire plug, 22 ft south of concrete curb on Riverport Drive, 100 ft southeast of a concrete bridge and drainage ditch, 3 mi northwest of Pleasure Ridge Park. Owner: Jefferson County.

AQUIFER.--Glacial and and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 97 ft, screened 95-97 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 441.8 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--July 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.30 ft below land-surface datum, July 13, 1983; lowest measured, 40.04 ft below land-surface datum, Oct. 27, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 27, 1988	40.04	Apr. 25, 1989	35.75

381032085525601. Local number 78-3, map number 27.

LOCATION.--Lat 38°10'32", long 85°52'56", Hydrologic Unit 05140101, County Code 111, Lanesville quadrangle, at the southwest corner of Cane Run Road and Lower Hunters Trace, 20 ft south of Cane Run Road, 100 ft west of Lower Hunters Trace, and 0.8 mi east of Ohio River, in Louisville. Owner: Jefferson County.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 86.7 ft, screened 84.7-86.7 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 448.90 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.75 ft below land-surface datum, May 23, 1978; lowest measured, 45.86 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	45.86	Apr. 25, 1989	41.05

JEFFERSON COUNTY

381034085502601. Local number 50-10-2 (RR-30), map number 28.

LOCATION.--Lat 38°10'34", long 85°50'26", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on south edge of Rockford Lane near west bank of Mill Creek, in Shively. Owner: Jefferson County.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 94 ft, screened 90-92 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 442.96 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.31 ft above land-surface datum.

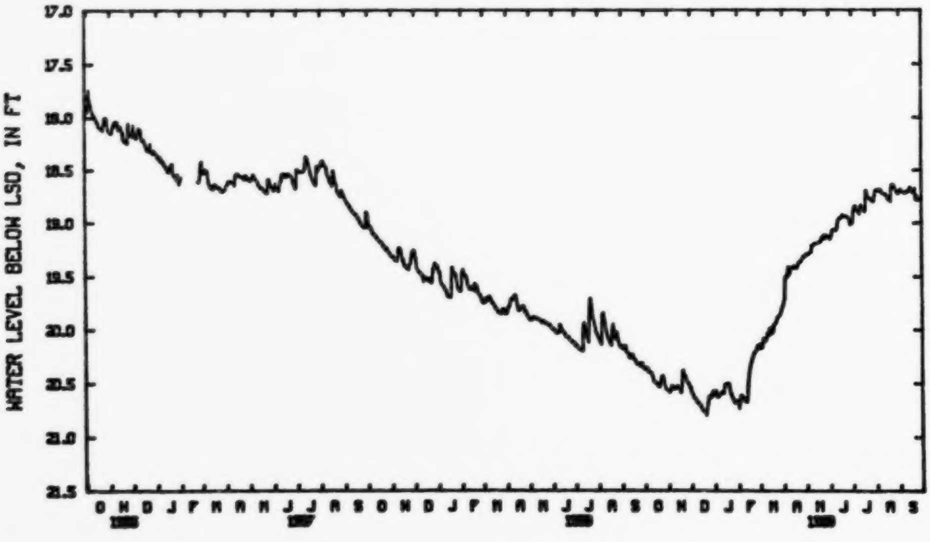
REMARKS.--Water-quality sample May 6, 1945.

PERIOD OF RECORD.--April 1945 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 15.38 ft below land-surface datum, Apr. 14, 1980; lowest 31.55 ft below land-surface datum, Apr. 2, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

1	20.37	20.57	20.58	20.61	20.70	20.18	19.77	19.29	19.14	19.00	18.69	18.72
2	20.37	20.59	20.60	20.61	20.74	20.15	19.73	19.29	19.16	19.00	18.69	18.69
3	20.35	20.59	20.60	20.57	20.67	20.13	19.71	19.30	19.14	18.89	18.69	18.68
4	20.36	20.59	20.64	20.64	20.62	20.17	19.50	19.29	19.11	18.86	18.69	18.68
5	20.39	20.52	20.64	20.63	20.61	20.16	19.52	19.28	19.07	18.84	18.70	18.70
6	20.40	20.52	20.64	20.63	20.63	20.08	19.51	19.27	19.07	18.84	18.68	18.71
7	20.40	20.55	20.65	20.62	20.63	20.11	19.48	19.27	19.06	18.87	18.68	18.71
8	20.40	20.56	20.68	20.60	20.64	20.11	19.41	19.27	19.06	18.88	18.69	18.72
9	20.41	20.55	20.68	20.59	20.67	20.10	19.49	19.21	19.06	18.90	18.71	18.72
10	20.41	20.55	20.68	20.58	20.65	20.08	19.47	19.21	19.07	18.91	18.72	18.72
11	20.44	20.55	20.70	20.60	20.64	20.04	19.44	19.21	19.07	18.92	18.72	18.70
12	20.47	20.52	20.71	20.58	20.68	20.06	19.42	19.20	19.03	18.87	18.72	18.70
13	20.49	20.54	20.70	20.60	20.64	20.02	19.42	19.19	18.97	18.83	18.73	18.70
14	20.49	20.54	20.72	20.53	20.50	19.99	19.41	19.19	18.97	18.85	18.73	18.70
15	20.49	20.54	20.75	20.51	20.41	20.05	19.40	19.19	18.95	18.87	18.73	18.68
16	20.50	20.53	20.75	20.52	20.36	20.03	19.42	19.19	18.95	18.88	18.74	18.66
17	20.51	20.59	20.76	20.51	20.32	19.98	19.42	19.18	18.95	18.89	18.76	18.69
18	20.53	20.59	20.77	20.50	20.30	20.03	19.42	19.18	18.94	18.90	18.78	18.70
19	20.53	20.53	20.77	20.51	20.27	20.03	19.43	19.18	18.92	18.87	18.78	18.71
20	20.54	20.38	20.78	20.55	20.25	19.95	19.40	19.17	18.94	18.69	18.78	18.72
21	20.54	20.43	20.80	20.59	20.22	19.95	19.37	19.17	18.93	18.72	18.80	18.72
22	20.48	20.43	20.72	20.60	20.21	19.94	19.37	19.14	18.94	18.75	18.70	18.67
23	20.44	20.44	20.70	20.62	20.21	19.92	19.36	19.15	18.93	18.76	18.64	18.78
24	20.43	20.46	20.62	20.64	20.20	19.89	19.36	19.13	18.93	18.76	18.64	18.78
25	20.45	20.49	20.64	20.66	20.17	19.88	19.35	19.11	18.95	18.78	18.64	18.74
26	20.49	20.50	20.64	20.67	20.16	19.87	19.34	19.13	18.95	18.79	18.66	18.75
27	20.52	20.50	20.62	20.69	20.14	19.88	19.32	19.15	18.95	18.78	18.68	18.79
28	20.55	20.52	20.63	20.68	20.15	19.86	19.31	19.14	18.98	18.77	18.70	18.78
29	20.56	20.54	20.59	20.66	---	19.84	19.31	19.11	19.02	18.80	18.71	18.78
30	20.56	20.54	20.57	20.66	---	19.79	19.31	19.12	19.01	18.80	18.72	18.78
31	20.56	---	20.59	20.68	---	19.79	---	19.13	---	18.74	18.73	---
MAX	20.56	20.59	20.80	20.69	20.74	20.18	19.77	19.30	19.16	19.00	18.80	18.79
MIN	20.35	20.38	20.57	20.50	20.14	19.79	19.31	19.11	18.92	18.69	18.64	18.66



JEFFERSON COUNTY

381050085511001. Local number 51-10-1, (RR-29), map number 29.
LOCATION.--Lat 38°10'50", long 85°51'10", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 50 ft south of Rockford Lane, at the edge of an apartment house parking area, 0.3 mi southeast of the junction of Cane Run Road and Rockford Lane. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 64 ft, screened 62.5-64.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personel.
DATUM.--Elevation of land-surface datum is 444.18 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 3.60 ft above land-surface datum.
REMARKS.--Water-quality sample Apr. 3, 1945.
PERIOD OF RECORD.--April 1945 to current year. April 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.80 ft below land-surface datum, Apr. 16, 1980; lowest measured, 37.61 ft below land-surface datum, Mar. 21, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	27.76	Apr. 25, 1989	26.79

381102085512102. Local number 51-11-2, map number 30.
LOCATION.--Lat 38°11'02", long 85°51'21", Hydrologic Unit 05140101, County Code 111, at the east edge of a barn, behind a farmhouse at 4816 Cane Run Road, 650 ft southwest of the junction of Cane Run Road and Lees Lane, in Louisville. Owner: Kaufman Brothers.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Driven unused water-table well, diameter 2.5 in, depth 53 ft, case and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 452.26 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.35 ft above land-surface datum.
REMARKS.--Water-quality samples Apr. 4, 1944 to July 15, 1981.
PERIOD OF RECORD.--January 1944 to current year. January 1944 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.99 ft below land-surface datum, May 3, 1979; lowest measured, 50.10 ft below land-surface datum, Feb. 9, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	41.47	Apr. 25, 1989	40.15

381108085511301. Local number 51-11-4, (RR-31), map number 31.
LOCATION.--Lat 38°11'08", long 85°51'13", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 1 ft west of a steel pipe fence post, 0.1 mi northeast of the junction of Cane Run Road and Rockford Lane, at a former homesite in Louisville. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 61 ft, screened 59.5-61.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 445.66 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 0.10 ft above land-surface datum.
PERIOD OF RECORD.--May 1945 to current year. May 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.11 ft below land-surface datum, May 3, 1979; lowest measured, 46.18 ft below land-surface datum, Mar. 27, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	33.86	Apr. 25, 1989	32.93

JEFFERSON COUNTY

381123085491401. Local number 49-11-1, (RR-32), map number 33.
LOCATION.--Lat 38°11'23", long 85°49'14", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on the east edge of a private driveway, at 2134 Garrs Lane, 150 ft south of Garrs Lane, 400 ft southeast of the junction of Garrs and Eden Lanes, in Shively. Owner: Louis Risinger.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 108 ft, screened 106.5-108.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.55 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.60 ft above land-surface datum.
PERIOD OF RECORD.--May 1945 to current year. May 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.86 ft below land-surface datum, Apr. 25, 1985; lowest measured, 45.76 ft below land-surface datum, Mar. 21, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	31.70	Apr. 26, 1989	30.72

381130085515001. Local number 51-11-1, map number 35.
LOCATION.--Lat 38°11'30", long 85°51'50", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in a concrete well pit on the west side of a tool shed at the Thieneman Brothers vegetable farm, 0.3 mi northeast of the junction of Camp Ground Road and Lees Lane, in Louisville. Owner: Thieneman Brothers.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 70 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 453.64 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.00 ft above land-surface datum.
REMARKS.--Water level affected by pumping from nearby well.
PERIOD OF RECORD.--February 1944 to current year. February 1944 to November 1976 published in hydrograph form and on file at thedistrict office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.77 ft below land-surface datum, Apr. 23, 1986; lowest measured, 59.80 ft below land-surface datum, Jan. 24, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	49.25	Apr. 25, 1989	46.63

JEFFERSON COUNTY

381139085502301. Local number 81-2, map number 36.
LOCATION.--Lat 38°11'39", long 85°50'23", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 12 ft west of west bank of a drainage ditch, 21 ft northeast of west end of guardrail, 30 ft north of north edge of blacktop on Crums Lane, 40 ft northwest of northwest corner of concrete bridge, 1,000 ft east of junction of Cane Run Road and Crums Lane, in Louisville. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 54 ft, screened 41.5-43.5 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 444.91 ft above National Geodetic Vertical Datum. Measuring point: Top of casing at land-surface datum.
PERIOD OF RECORD.--May 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.59 ft below land-surface datum, Apr. 22, 1985; lowest measured, 30.21 ft below land-surface datum, Oct. 27, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 27, 1988	30.21	Apr. 25, 1989	29.55

381142085475702. Local number, 47-11-4, (RR-42), map number 37.
LOCATION.--Lat 38°11'42", long 85°47'57", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the concrete curb on the west side of Manslick Road, 0.1 mi south of junction of Manslick Road and Berry Boulevard, in Louisville. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 103 ft, screened 101.5-103.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 453.91 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--July 1945 to current year. July 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.02 ft below land-surface datum, Apr. 25, 1985; lowest measured, 49.27 ft below land-surface datum, Apr. 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	26.22	Apr. 24, 1989	25.39

381143085465801. Local number 46-11-2, (RR-25), map number 38.
LOCATION.--Lat 38°11'43", long 85°46'58", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in the center of the concrete sidewalk at the driveway to a Catholic Church, 100 ft northeast of the junction of Taylor Boulevard and Hathaway Street, in Louisville. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 60 ft, screened 59-60 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 458.66 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 0.97 ft below land-surface datum.
REMARKS.--Water quality sample Mar. 1, 1945.
PERIOD OF RECORD.--March 1945 to current year. March 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.42 ft below land-surface datum, Oct. 31, 1985; lowest measured, 52.63 ft below land-surface datum, Apr. 25, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	28.79	Apr. 24, 1989	28.25

JEFFERSON COUNTY

381155085483401. Local number 48-11-1, map number 39.
LOCATION.--Lat 38°11'55", long 85°48'34", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, under a pine tree behind house at 1910 Mathis Lane, 0.3 mi west of Dixie Highway, in Louisville. Owner: Charles Mathis.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.5 in, depth 64 ft, screened 62-64 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 461.04 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.80 ft above land-surface datum.
PERIOD OF RECORD.--February 1944 to current year. February 1944 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.91 ft below land-surface datum, Apr. 25, 1985; lowest measured, 55.20 ft below land-surface datum, Mar. 22, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	35.15	Apr. 24, 1989	34.17

381157085510201. Local number 51-11-6 (RR-39), map number 40.
LOCATION.--Lat 38°11'57", long 85°51'02", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at a farm gate, 20 ft north of Shanks Lane, 0.5 mi west of Cane Run Road, in Louisville. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 112 ft, screened 110-112 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 446.27 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 5.17 ft above land-surface datum.
PERIOD OF RECORD.--June 1945 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.42 ft below land-surface datum, June 14, 1980; lowest measured, 57.62 ft below land-surface datum, Feb. 25, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	40.21	Apr. 25, 1989	38.17

381204085455301. Local number CP-16, map number 41.
LOCATION.--Lat 38°12'04", long 85°45'53", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, near the south end of Wayside Park, 32 ft west of South Third Street curb, 52 ft east of Oakdale Avenue curb, 160 ft north of intersection with Southern Parkway, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered well, diameter 1.5 in, depth 23 ft, screened 21-23 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 456.82 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--May 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.46 ft below land-surface datum, Apr. 24, 1984; lowest measured, 13.84 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	13.84	Apr. 24, 1989	12.10

JEFFERSON COUNTY

381207085484601. Local number 48-12-15, (RR-41), map number 42.
LOCATION.--Lat 38°12'07", long 85°48'46", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on the east edge of a private driveway at the south end of a hedge, 3 ft west of a chain link fence, 100 ft northeast of junction of Farnsley and Janell Roads, in Shively. Owner: Jefferson County.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 91 ft, screened 89.5-91.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 457.25 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 0.12 ft below land-surface datum.
REMARKS.--Water-quality sample June 29, 1945.
PERIOD OF RECORD.--June 1945 to current year. June 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.68 ft below land-surface datum, Apr. 25, 1985; lowest measured, 52.81 ft below land-surface datum, Mar. 22, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	33.07	Apr. 24, 1989	32.10

381209085472101. Local number 47-12-3, (C-7), map number 43.
LOCATION.--Lat 38°12'09", long 85°47'21", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in an open field near a sewer manhole, 200 ft west of the west end of Weyler Avenue, 0.2 mi east of 7th Street Road and Yellowstone Distillery, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 97 ft, screened 95-97 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 448.60 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.75 ft above land-surface datum.
PERIOD OF RECORD.--October 1935 to current year. October 1935 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.95 ft below land-surface datum, Apr. 25, Oct. 31, 1985; lowest measured, 52.19 ft below land-surface datum, Feb. 19, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	20.63	Apr. 24, 1989	19.94

381212085473801. Local number 47-12-2, (C-6), map number 44.
LOCATION.--Lat 38°12'12", long 85°47'38", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 100 ft north of the north entrance gate to the Yellowstone Distillery, 0.1 mi west of 7th Street Road, in Shively. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 102 ft, screened 100-102 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 453.59 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.00 ft above land-surface datum.
PERIOD OF RECORD.--October 1935 to current year. October 1935 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.98 ft below land-surface datum, Apr. 25, 1985; lowest measured, 59.63 ft below land-surface datum, Feb. 19, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	25.72	Apr. 24, 1989	25.00

JEFFERSON COUNTY

381213085521701. Local number 52-12-2, (RR-22), map number 45.

LOCATION.--Lat 38°12'13", long 85°52'17", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 50 ft south of Ohio River at the Stauffer Chemical Company Plant, 0.9 mi north of junction of Camp Ground Road and Lees Lane, in Louisville. Owner: Stauffer Chemical Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 101 ft, screened 99-101 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 434.30 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.16 ft above land-surface datum.

REMARKS.--Water levels affected by Ohio River. Water-quality sample collected Feb. 12, 1945.

PERIOD OF RECORD.--August 1945 to current year. August 1945 to September 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.50 ft below land-surface datum, Apr. 20, 1948; lowest measured, 51.79 ft below land-surface datum, June 18, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	46.47	Apr. 25, 1989	37.66

381221085475001. Local number 47-12-1, (C-5), map number 46.

LOCATION.--Lat 38°12'21", long 85°47'50", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the old Frankfort Four Roses Distillery, 60 ft north of a whiskey storage warehouse, 600 ft east of junction of Dixie Highway and Ralph Avenue, in Shively. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 96 ft, screened 94-96 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 462.93 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 4.10 ft above land-surface datum.

PERIOD OF RECORD.--October 1935 to current year. October 1935 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.74 ft below land-surface datum, Nov. 01, 1985; lowest measured, 71.06 ft below land-surface datum, Feb. 2, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	36.42	Apr. 24, 1989	35.70

JEFFERSON COUNTY

381222085505201. Local number 50-12-16 (RR-27), map number 47.

LOCATION.--Lat 38°12'22", long 85°50'52", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on the south edge of Kramer's Lane, at the east side of the entrance driveway to Marathon Oil Company storage terminal, 300 ft southwest of the junction of Camp Ground Road and Kramers Lane, in Louisville. Owner: Jefferson County.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 112 ft, screened 110.5-112.0 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 445.58 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 3.40 ft above land-surface datum.

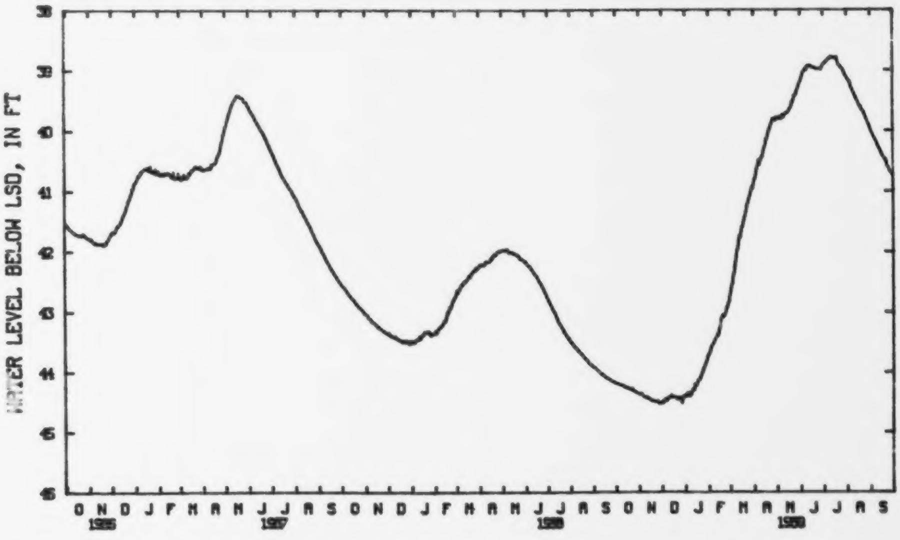
REMARKS.--Water level affected by pumping from nearby wells. Water-quality sample collected Mar. 23, 1945.

PERIOD OF RECORD.--March 1945 to current year. March 1945 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.24 ft below land-surface datum, June 9, 1984; lowest measured, 68.37 ft below land-surface datum, Oct. 7, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44.18	44.37	44.53	44.42	43.72	42.80	40.91	39.78	39.21	38.93	39.11	39.96
2	44.20	44.38	44.52	44.41	43.69	42.70	40.81	39.80	39.18	38.91	39.14	40.00
3	44.20	44.37	44.48	44.37	43.68	42.62	40.80	39.82	39.15	38.89	39.16	40.03
4	44.20	44.35	44.52	44.41	43.62	42.56	40.73	39.79	39.11	38.89	39.17	40.06
5	44.21	44.38	44.48	44.35	43.58	42.54	40.66	39.77	39.06	38.87	39.20	40.08
6	44.22	44.40	44.45	44.40	43.56	42.41	40.60	39.79	39.03	38.86	39.20	40.11
7	44.22	44.41	44.45	44.35	43.54	42.36	40.56	39.82	39.01	38.84	39.27	40.13
8	44.22	44.43	44.49	44.41	43.52	42.27	40.48	39.80	38.99	38.83	39.30	40.16
9	44.23	44.43	44.45	44.37	43.49	42.19	40.57	39.74	38.97	38.82	39.33	40.18
10	44.22	44.43	44.42	44.33	43.46	42.10	40.51	39.79	39.01	38.81	39.36	40.22
11	44.24	44.44	44.44	44.29	43.43	41.99	40.47	39.78	38.97	38.80	39.39	40.25
12	44.25	44.41	44.42	44.29	43.42	41.96	40.43	39.74	38.92	38.78	39.42	40.28
13	44.26	44.45	44.42	44.31	43.37	41.85	40.42	39.72	38.95	38.78	39.44	40.30
14	44.25	44.45	44.38	44.21	43.40	41.75	40.34	39.71	38.95	38.79	39.47	40.32
15	44.26	44.45	44.44	44.24	43.31	41.78	40.30	39.71	38.92	38.81	39.50	40.35
16	44.27	44.47	44.41	44.23	43.28	41.69	40.26	39.70	38.94	38.79	39.52	40.38
17	44.27	44.49	44.43	44.18	43.19	41.60	40.20	39.69	38.97	38.81	39.56	40.42
18	44.29	44.48	44.41	44.15	43.12	41.60	40.14	39.66	38.95	38.82	39.59	40.43
19	44.28	44.47	44.41	44.13	43.10	41.52	40.13	39.64	38.95	38.78	39.59	40.45
20	44.29	44.49	44.42	44.14	43.06	41.44	40.07	39.62	38.95	38.80	39.62	40.48
21	44.29	44.50	44.47	44.10	43.10	41.43	40.03	39.59	38.96	38.86	39.66	40.50
22	44.30	44.49	44.44	44.06	43.06	41.36	39.97	39.53	38.99	38.91	39.66	40.47
23	44.27	44.49	44.45	44.04	43.05	41.28	39.96	39.53	38.98	38.93	39.68	40.58
24	44.32	44.49	44.43	44.01	43.00	41.23	39.90	39.48	38.99	38.94	39.71	40.60
25	44.32	44.50	44.48	43.97	42.93	41.19	39.88	39.42	38.99	38.96	39.74	40.61
26	44.33	44.47	44.47	43.94	42.94	41.13	39.85	39.42	38.97	38.98	39.77	40.65
27	44.32	44.52	44.42	43.91	42.87	41.09	39.81	39.41	38.97	38.98	39.81	40.68
28	44.35	44.54	44.53	43.87	42.85	41.04	39.81	39.36	38.99	38.99	39.83	40.69
29	44.35	44.51	44.46	43.84	---	40.99	39.80	39.32	39.00	39.03	39.86	40.71
30	44.36	44.52	44.40	43.80	---	40.93	39.85	39.28	38.96	39.07	39.90	40.73
31	44.36	---	44.42	43.75	---	40.97	---	39.25	---	39.09	39.92	---
MAX	44.36	44.54	44.53	44.42	43.72	42.80	40.91	39.82	39.21	39.09	39.92	40.73
MIN	44.18	44.35	44.38	43.75	42.85	40.93	39.80	39.25	38.92	38.78	39.11	39.96



JEFFERSON COUNTY

381224085474001. Local number 47-12-19, (owner's no. 1), map number 48.
LOCATION.--Lat 38°12'24", long 85°47'40", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, behind the fermentation building, at the Early Times Distillery, 1,500 ft northeast of the junction of Dixie Highway and Ralph Avenue, in Louisville. Owner: Brown and Forman Distillers, Inc.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in, depth 104 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 456.81 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 2.43 ft above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--March 1947 to current year. March 1947 to September 1976 published in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.97 ft below land-surface datum, Apr. 25, 1985; lowest measured, 62.91 ft below land-surface datum, Nov. 15, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	29.93	Apr. 24, 1989	29.12

381229085510201. Local number Triangle Refinery #1, map number 49.
LOCATION.--Lat 38°12'29", long 85°51'02", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the north end of oil storage tank field at the Triangle Refinery, 750 ft northwest of intersection of Camp Ground Road and Kramers Lane, in Louisville. Owner: Triangle Refinery.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 68.8 ft, screened 66.8-68.8 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 450.57 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.00 ft above land-surface datum.
PERIOD OF RECORD.--September 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.78 ft below land-surface datum, Apr. 24, 1989; lowest measured, 56.59 ft below land-surface datum, Nov. 28, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	53.34	Apr. 24, 1989	46.78

JEFFERSON COUNTY

381246085470601. Local number 47-12-4, (owner's number TW-2), map number 50.

LOCATION.--Lat 38°12'46", long 85°47'06", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the southeast corner of Seagrams employees' parking lot, Seventh Street Road at Wathen Lane, 100 ft southeast of a Ranney collector well, in Louisville. Owner: Joseph E. Seagram and Sons Distillery.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 103 ft, cased and screened.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 458.64 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.39 ft above land-surface datum.

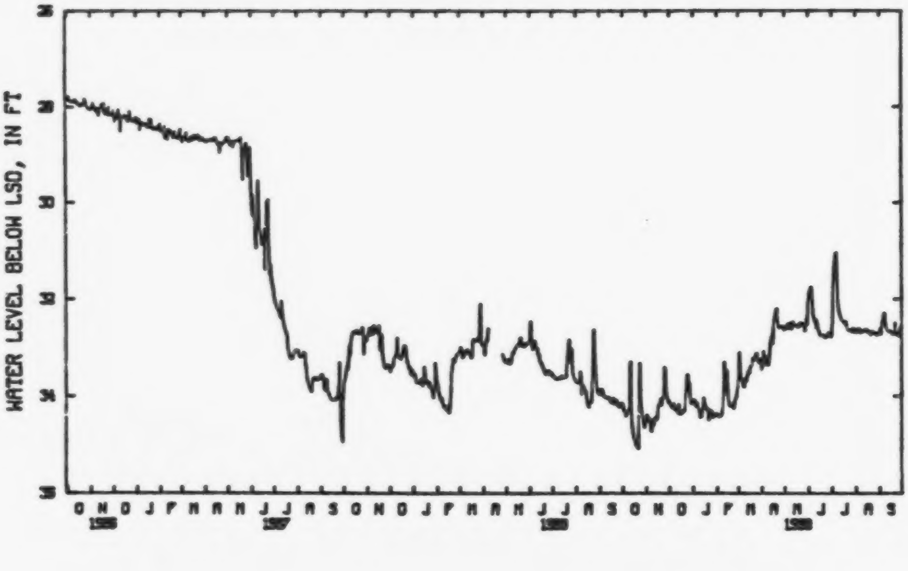
REMARKS.--Water levels affected by pumping from nearby collector well.

PERIOD OF RECORD.--October 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.44 ft below land-surface datum, Jan. 11, 1985; lowest, 88.37 ft below land-surface datum, Mar. 9, 1944.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.16	34.42	34.16	34.13	34.36	33.78	33.48	32.60	32.10	32.73	32.67	32.61
2	34.23	34.39	34.21	34.18	34.38	33.47	33.43	32.58	31.91	32.47	32.71	32.68
3	34.30	34.50	34.18	34.09	34.43	33.10	33.36	32.63	31.83	31.86	32.67	32.73
4	34.32	34.48	34.26	34.24	34.43	33.52	33.08	32.56	31.83	31.43	32.61	32.62
5	34.42	34.46	34.23	34.17	34.39	33.67	33.35	32.51	31.76	31.25	32.61	32.52
6	34.42	34.55	34.17	34.14	34.42	33.66	33.35	32.57	31.95	31.13	32.61	32.43
7	34.37	34.72	34.16	34.20	34.39	33.80	33.29	32.62	32.33	31.05	32.70	32.34
8	34.33	34.74	34.29	34.31	34.33	33.82	33.19	32.59	32.42	31.45	32.69	32.30
9	34.30	34.66	34.29	34.34	34.20	33.83	33.37	32.49	32.48	32.04	32.69	32.52
10	34.28	34.50	34.27	34.45	33.99	33.73	33.38	32.63	32.61	32.23	32.68	32.60
11	33.56	34.60	34.34	34.42	33.30	33.63	33.26	32.62	32.43	32.31	32.64	32.67
12	33.30	34.45	34.36	34.27	33.92	33.69	33.10	32.47	32.49	32.36	32.64	32.67
13	34.39	34.48	34.17	34.42	33.96	33.59	32.90	32.51	32.61	32.41	32.63	32.69
14	34.63	34.48	34.21	34.20	33.46	33.49	32.78	32.54	32.66	32.45	32.67	32.66
15	34.77	34.49	34.38	34.04	33.53	33.52	32.85	32.56	32.70	32.47	32.62	32.68
16	34.87	34.38	34.38	34.16	33.94	33.53	32.93	32.57	32.75	32.48	32.64	32.64
17	34.89	34.19	34.32	34.27	34.22	33.40	32.61	32.60	32.77	32.51	32.68	32.73
18	34.99	34.16	34.35	34.24	34.22	33.38	32.44	32.60	32.77	32.53	32.71	32.73
19	34.99	34.12	34.33	34.29	34.20	33.36	32.34	32.55	32.75	32.47	32.69	32.74
20	35.06	34.05	34.31	34.27	34.15	33.22	32.26	32.50	32.75	32.53	32.67	32.71
21	35.05	34.20	34.29	34.50	34.15	33.27	32.21	32.58	32.76	32.60	32.75	32.69
22	35.09	34.09	34.12	34.50	34.22	33.27	32.46	32.49	32.81	32.66	32.69	32.49
23	33.86	34.03	33.95	34.44	34.27	33.19	32.59	32.51	32.81	32.65	32.67	32.72
24	33.33	33.98	33.70	34.30	34.24	33.16	32.62	32.53	32.77	32.65	32.67	32.75
25	34.16	33.42	33.57	34.33	34.09	33.12	32.57	32.53	32.77	32.67	32.69	32.68
26	34.33	33.49	33.80	34.32	34.03	33.12	32.57	32.58	32.73	32.68	32.70	32.70
27	34.44	33.91	33.74	34.44	34.02	33.29	32.57	32.67	32.69	32.66	32.73	32.78
28	34.52	34.04	34.00	34.43	33.86	33.33	32.56	32.65	32.73	32.60	32.75	32.60
29	34.65	34.14	34.17	34.41	---	33.33	32.58	32.49	32.78	32.69	32.75	32.60
30	34.66	34.10	34.15	34.37	---	33.30	32.66	32.42	32.79	32.61	32.71	32.57
31	34.62	---	34.09	34.38	---	33.22	---	32.53	---	32.64	32.72	---
MAX	35.09	34.74	34.38	34.50	34.43	33.83	33.48	32.67	32.81	32.73	32.75	32.78
MIN	33.30	33.42	33.57	34.04	33.30	33.10	32.21	32.42	31.76	31.05	32.61	32.30



JEFFERSON COUNTY

381250085484901. Local number 48-12-1, (C-2), map number 51.

LOCATION.--Lat 38°12'50", long 85°48'49", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in an open field at a sewer manhole, 0.2 mi east of the junction of Cane Run Road and Camp Ground Road, in Louisville. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 117 ft, screened 115-117 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 453.61 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1935 to current year. October 1935 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.44 ft below land-surface datum, Apr. 26, 1984 and Apr. 25, 1985; lowest measured, 67.95 ft below land-surface datum, July 12, 1960.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	35.83	Apr. 24, 1989	35.25

381251085483501. Local number 48-12-2, (C-3), map number 52.

LOCATION.--Lat 38°12'51", long 85°48'35", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in an open field, 200 ft east of Tucker Avenue, 300 ft north of the Stitzel-Weller Distillery, in Louisville. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 117 ft, screened 115-117 ft.

INSTRUMENTATION.--Bi-annual measuremsent with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 465.95 ft above National Geodetic Vertical Datum. Measurin point: Top of casing, .60 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby wells.

PERIOD OF RECORD.--October 1935 to current year. October 1935 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.72 ft below land-surface datum, Apr. 25, 1985; lowest measured, 78.99 ft below land-surface datum, Nov. 1, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	46.16	Apr. 24, 1989	46.06

381251085500501. Local number 50-12-18, (RR-35), map number 53.

LOCATION.--Lat 38°12'51", long 85°50'05", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 60 ft north of Camp Ground Road, 1,500 ft northeast of junction of Camp Ground Road and Ralph Avenue, in Louisville. Owner: Air Reduction Company, Inc.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 120 ft, screened 118-120 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 455.54 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 5.02 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells. Water-quality sample collected May 24, 1945.

PERIOD OF RECORD.--May 1945 to current year. May 1945 to September 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.25 ft below land-surface datum, Apr. 25, 1985; lowest measured, 78.35 ft below land-surface datum, Mar. 20, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	53.56	Apr. 24, 1989	50.19

JEFFERSON COUNTY

381256085471501. Local number 47-12-14, (TW-2), map number 54.
LOCATION.--Lat 38°12'56", long 85°47'15", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in a brick pump house (building number 54) at the National Distillers Products Company Plant, 50 ft north of Wathen Lane, 0.4 mi east of Dixie Highway, in Louisville. Owner: National Distillers Products Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 97 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 454.37 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 7.72 ft above land-surface datum.
REMARKS.--Water level affected by pumping from nearby wells.
PERIOD OF RECORD.--October 1941 to current year. October 1941 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.57 ft below land-surface datum, Apr. 24, 1985; lowest measured, 75.98 ft below land-surface datum, Mar. 31, Apr. 10, May 6, 1943.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	29.27	Apr. 25, 1989	27.36

381257085471801. Local number 47-12-15, (TW-4), map number 55.
LOCATION.--Lat 38°12'57", long 85°47'18", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in the truck parking lot at the National Distillers Products Company Plant, 50 ft north of Wathen Lane, 0.3 mi east of Dixie Highway, in Louisville. Owner: National Distillers Products Company
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 84 ft, cased and screened.
INSTRUMENTAION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.07 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 4.70 ft above land-surface datum.
REMARKS.--Water level affected by pumping from nearby wells.
PERIOD OF RECORD.--July 1942 to current year. July 1942 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.71 ft below land-surface datum, Apr. 24, 1985; lowest measured, 72.47 ft below land-surface datum, Feb. 19, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	29.66	Apr. 25, 1989	28.21

381259085471502. Local number 47-12-16. (TW-1), map number 56.
LOCATION.--Lat 38°12'59", long 85°47'15", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, between two whiskey storage warehouses at the National Distillers Products Company Plant, 300 ft north of Wathen Lane, 0.4 mi east of Dixie Highway, in Shively. Owner: National Distillers Products Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 99 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 454.43 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 6.25 ft above land-surface datum.
REMARKS.--Water level affected by pumping from nearby wells.
PERIOD OF RECORD.--October 1941 to current year. October 1941 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.89 ft below land-surface datum, Apr. 24, 1985; lowest measured, 72.70 ft below land-surface datum, Feb. 6, 1945.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	29.11	Apr. 25, 1989	27.39

JEFFERSON COUNTY

381259085511002. Local number 51-13-1, (RR-21), map number 57.
LOCATION.--Lat 38°12'59", long 85°51'10", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on south bank of Ohio River directly behind the Du Pont Chemical Company Plant, 200 ft northeast of a large brick pump house, 0.8 mi southwest of junction of Ralph Avenue and Camp Ground Road, in Louisville. Owner: Du Pont Chemical Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 107 ft, screened 105.5-107.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 440.20 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 1.90 ft above land-surface datum.
PERIOD OF RECORD.--February 1945 to current year. February 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.87 ft below land-surface datum, Apr. 9, 1975; lowest measured, 64.39 ft below land-surface datum, Nov. 12, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	55.75	Apr. 24, 1989	45.59

381305085501302. Local number Reynolds Metal #1, map number 58.
LOCATION.--Lat 38°13'05", long 85°50'13", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at Reynolds Metals Plant Number 5, near southeast corner of a metal garage, 0.4 mi north of the junction of Camp Ground Road and Ralph Avenue, in Louisville. Owner: Reynolds Metals Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in, depth 111 ft, screened 95-111 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 450.25 ft above National Geodetic Vertical Datum. Measuring point: Top of 2 in pipe in pump base, 1.50 ft above land-surface datum.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.13 ft below land-surface datum, Apr. 26, 1984; lowest measured, 54.73 ft below land-surface datum, Oct. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	54.73	Apr. 24, 1989	48.77

381309085505302. Local number 50-13-56 (RR-24), map number 59.
LOCATION.--Lat 38°13'09", long 85°50'53", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, on what was once south bank of Paddy Run (now covered), between the Ohio River floodwall and south bank of the Ohio River, directly behind the Du Pont Chemical Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 92 ft, screened 90.5-92.0 ft.
INSTRUMENTATION.--Bi-anneual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 425.78 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.38 ft below land-surface datum.
PERIOD OF RECORD.--February 1945 to current year. February 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Apr. 15, 1970; lowest measured, 49.71 ft below land-surface datum, Jan. 25, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	39.04	Apr. 24, 1989	28.88

JEFFERSON COUNTY

381313085495501. Local number 49-13-25, (TW-2), map number 60.

LOCATION.--Lat 38°13'13", long 85°49'55", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 10 ft east of pump well number 4, at the B.F. Goodrich Company Plant, 50 ft west of an electric power substation, 0.25 mi south of Bells Lane, in Louisville. Owner: B.F. Goodrich Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2 in, depth 100 ft, cased and screened.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 452.26 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.40 ft above land-surface datum.

REMARKS.--Water level affected by pumping from nearby well.

PERIOD OF RECORD.--August 1947 to current year. August 1947 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.57 ft below land-surface datum, Apr. 27, 1982; lowest measured, 97.09 ft below land-surface datum, Mar. 29, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	53.61	Apr. 24, 1989	54.55

381315085501401. Local number 50-13-65, (TW-11), map number 61.

LOCATION.--Lat 38°13'15", long 85°50'14", Hydrologic Unit 05140101, County Code 111, at the old National Carbide Plant, 500 ft southeast of the liquid nitrogen unit, 1,000 ft south of Bells Lane, in Louisville. Owner: Air Reduction Company, Inc.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 107 ft, cased and screened.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 449.69 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.60 ft above land-surface datum.

REMARKS.--Water levels affected by pumping from nearby wells.

PERIOD OF RECORD.--June 1956 to current year. June 1956 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.48 ft below land-surface datum, Apr. 26, 1984; lowest measured, 92.02 ft below land-surface datum, Dec. 21, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

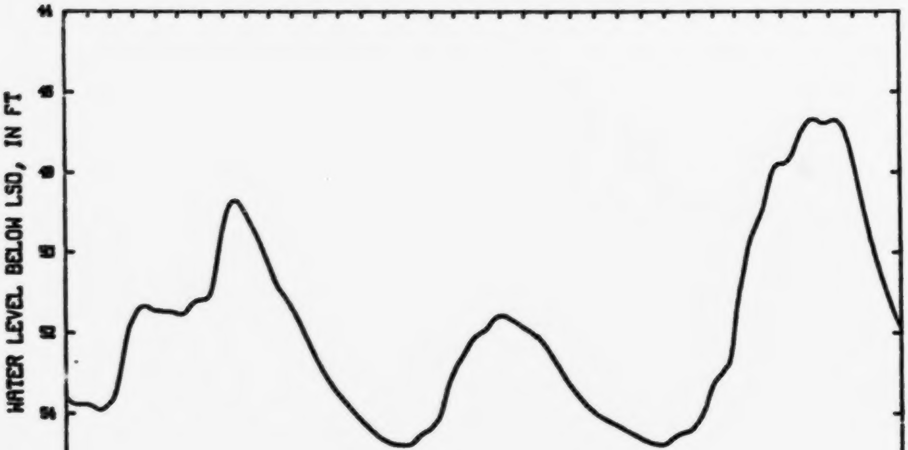
Date	Water level	Date	Water level
Oct. 18, 1988	54.44	Apr. 24, 1989	48.22

JEFFERSON COUNTY

381315085502602. Local number 50-13-79, (NC-TW-D), map number 62.
LOCATION.--Lat 38°13'15", long 85°50'26", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 800 ft south of Bells Lane, 0.3 mi east of the Ohio River, at the National Carbide Plant in Louisville. Owner: Air Reduction Company, Inc.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 108 ft, cased and screened.
INSTRUMENTATION.--Digital recorder -- 60-minute punch.
DATUM.--Elevation of land-surface datum is 448.68 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.72 ft above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--January 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.34 ft below land-surface datum, May 23, 1984; lowest, 67.29 ft below land-surface datum, Nov. 13, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.35	54.67	54.73	54.41	53.20	51.60	49.15	47.78	46.80	46.73	47.83	50.35
2	54.36	54.68	54.72	54.39	53.17	51.45	49.11	47.78	46.77	46.72	47.91	50.42
3	54.37	54.69	54.70	54.37	53.15	51.30	49.06	47.78	46.75	46.71	48.00	50.48
4	54.38	54.70	54.69	54.35	53.12	51.17	49.01	47.78	46.73	46.71	48.09	50.54
5	54.39	54.70	54.67	54.33	53.10	51.05	48.96	47.76	46.71	46.70	48.18	50.60
6	54.40	54.71	54.65	54.30	53.08	50.94	48.91	47.75	46.69	46.70	48.27	50.66
7	54.42	54.72	54.64	54.28	53.06	50.85	48.84	47.74	46.69	46.70	48.36	50.72
8	54.43	54.73	54.62	54.25	53.04	50.76	48.76	47.72	46.68	46.71	48.45	50.78
9	54.44	54.74	54.61	54.23	53.02	50.68	48.68	47.70	46.68	46.71	48.55	50.84
10	54.45	54.74	54.59	54.20	52.99	50.60	48.61	47.67	46.68	46.72	48.64	50.89
11	54.45	54.75	54.58	54.17	52.96	50.50	48.53	47.65	46.68	46.73	48.73	50.95
12	54.47	54.76	54.57	54.14	52.94	50.41	48.44	47.62	46.69	46.75	48.82	51.01
13	54.48	54.76	54.55	54.11	52.91	50.30	48.36	47.59	46.69	46.77	48.91	51.06
14	54.49	54.77	54.54	54.08	52.88	50.20	48.28	47.56	46.70	46.79	48.99	51.11
15	54.50	54.77	54.53	54.04	52.86	50.09	48.21	47.52	46.71	46.81	49.08	51.17
16	54.51	54.77	54.52	54.01	52.84	50.00	48.14	47.47	46.72	46.84	49.17	51.22
17	54.52	54.78	54.51	53.97	52.82	49.91	48.07	47.43	46.74	46.86	49.25	51.28
18	54.53	54.78	54.50	53.92	52.80	49.83	48.02	47.38	46.76	46.90	49.34	51.34
19	54.54	54.78	54.49	53.88	52.76	49.76	47.97	47.33	46.77	46.93	49.42	51.39
20	54.55	54.78	54.49	53.82	52.72	49.70	47.93	47.27	46.78	46.97	49.50	51.44
21	54.56	54.79	54.48	53.77	52.65	49.64	47.89	47.22	46.79	47.02	49.59	51.49
22	54.57	54.79	54.48	53.71	52.57	49.59	47.86	47.17	46.78	47.08	49.67	51.54
23	54.58	54.79	54.47	53.65	52.48	49.55	47.84	47.11	46.78	47.15	49.75	51.58
24	54.59	54.79	54.46	53.59	52.37	49.50	47.82	47.07	46.79	47.21	49.79	51.63
25	54.60	54.78	54.46	53.53	52.24	49.46	47.80	47.02	46.78	47.28	49.87	51.68
26	54.61	54.78	54.46	53.47	52.08	49.41	47.79	46.98	46.78	47.35	49.95	51.72
27	54.62	54.77	54.45	53.42	51.92	49.37	47.78	46.95	46.77	47.42	50.02	51.77
28	54.63	54.76	54.45	53.37	51.76	49.32	47.78	46.92	46.76	47.50	50.10	51.81
29	54.65	54.76	54.44	53.32	---	49.27	47.78	46.89	46.75	47.57	50.17	51.83
30	54.65	54.74	54.43	53.28	---	49.22	47.78	46.86	46.74	47.65	50.23	51.87
31	54.67	---	54.42	53.24	---	49.18	---	46.83	---	47.74	50.29	---
MAX	54.67	54.79	54.73	54.41	53.20	51.60	49.15	47.78	46.80	47.74	50.29	51.87
MIN	54.35	54.67	54.42	53.24	51.76	49.18	47.78	46.83	46.68	46.70	47.83	50.35



JEFFERSON COUNTY

381316085502101. Local number 50-13-77, (TW-12), map number 63.
LOCATION.--Lat 38°13'16", long 85°50'21", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 200 ft south of the liquid nitrogen unit at the old National Carbide Plant, 900 ft southeast of Belle Lane, in Louisville. Owner: Air Reduction Company, Inc.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 107 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 447.69 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.70 ft above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--January 1956 to current year. January 1956 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.43 ft below land-surface datum, Apr. 26, 1984; lowest measured, 90.90 ft below land-surface datum, Oct. 13, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	52.82	Apr. 25, 1989	46.18

381320085464101. Local number CP-15, map number 64.
LOCATION.--Lat 38°13'20", long 85°45'41", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the northeast corner of Samuel Jones Park, Patton Court and South 13th Street, 14 ft south of chain link fence, 22 ft south of curb on south side of Patton Court, 45 ft west of curb on west side of south 13th Street. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 100 ft, screened 96.5-100.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface surface datum is 453.68 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.84 ft below land-surface datum, Apr. 23, 1985; lowest measured, 30.03 ft below land-surface datum, Dec. 14, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	27.51	Apr. 25, 1989	26.54

381324085460401. Local number 46-13-25, map number 65.
LOCATION.--Lat 38°13'24", long 85°46'04", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in an old pumping house across the alley from the northwest corner of the boiler house, at the American-Standard Company Plant, 1541 South 7th Street, in Louisville. Owner: American-Standard Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in, depth 105 ft, screened 91-105 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 461.49 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.00 ft above land-surface datum.
PERIOD OF RECORD.--March 1950 to current year. March 1950 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.10 ft below land-surface datum, Apr. 23, 1985; lowest measured, 70.05 ft below land-surface datum, Mar. 3, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	34.42	Apr. 25, 1989	33.79

JEFFERSON COUNTY

381331085491601. Local number 49-13-40, (RR-26), map number 66.
LOCATION.--Lat 38°13'31", long 85°49'40", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the southeast corner of Algonquin Parkway and 39th Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 115 ft, screened 113.5-115.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 450.43 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 1.40 ft above land-surface datum.
REMARKS.--Water-quality samples Mar. 13, 1945 to June 28, 1966.
PERIOD OF RECORD.--March 1945 to current year. March to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.01 ft below land-surface datum, Apr. 25, 1985; lowest measured, 76.25 ft below land-surface datum, Nov. 29, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	40.87	Apr. 25, 1989	40.10

381332085494001. Local number 49-13-5, (TW-10), map number 67.
LOCATION.--Lat 38°13'32", long 85°49'40", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 50 ft west of railroad tracks, 0.1 mi northwest of railroad crossing Bells Lane, in Louisville. Owner: B.F. Goodrich Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2 in, depth 115 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 456.47 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.20 ft above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--January 1945 to September 1989 (destroyed). January 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.90 ft below land-surface datum, Oct. 31, 1984; lowest measured, 101.47 ft below land-surface datum, Aug. 24, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	50.98	Apr. 24, 1989	Well destroyed

381338085481601. Local number, CP 8, map number 68.
LOCATION.--Lat 38°13'38", long 85°48'16", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the southwest corner of Algonquin Park, 20 ft east of Beech Street, 60 ft north of an alley, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 109.0 ft, screened 106-109 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 457.60 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--August 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.89 ft below land-surface datum, Apr. 23, 1985; lowest measured, 45.64 ft below land-surface datum, Aug. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	39.02	Apr. 25, 1989	38.54

JEFFERSON COUNTY

381346085453801. Local number 45-13-2 (St. Patricks well), map number 69.

LOCATION.--Lat 38°13'46", long 85°45'38", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the rear of Van Brook Manor Nursing Home, 1382 South Third Street, in Louisville. Owner: Van Brook Manor, Inc.

AQUIFER.--Knox Dolomite of Early Ordovician age. Aquifer code: 367KNOX.

WELL CHARACTERISTICS.--Drilled artesian (flowing) gas test, diameter 1-3/4 in, depth 1952 ft, length of wooden casing unknown.

INSTRUMENTATION.--Bi-annual volumetric measurement by USGS personnel.

DATUM.--Elevation of land-surface datum is 458.15 ft above National Geodetic Vertical Datum. Measuring point: Valve at pressure gage, 0.30 ft below land-surface datum.

REMARKS.--Water-quality samples Feb. 9, 1938 to July 7, 1981.

PERIOD OF RECORD.--February 1971 to current year. February 1971 to September 1977 unpublished, on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Maximum water flow measured, 0.50 gal/min Mar. 6, 1978; minimum measured, zero flow (frozen) Jan. 31, 1977.

WATER FLOW, IN GALLONS PER MINUTE (GAL/MIN), WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water flow	Date	Water flow
Oct. 17, 1988	0.168 gal/min	Apr. 24, 1989	0.155 gal/min

381346085454201. Local number CP 1, map number 70.

LOCATION.--Lat 38°13'46", long 85°45'42", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the southeast corner of Central Park, 100 ft north of a concrete retaining wall on Magnolia Street, 20 ft west of concrete retaining wall on South Fourth Street, in Louisville. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 106.2 ft, screened 103.2-106.2 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 459.86 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.

REMARKS.--Water-quality sample collected June 16, 1978 to Sept. 17, 1981.

PERIOD OF RECORD.--June 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.98 ft below land-surface datum, Apr. 23, 1985; lowest measured, 41.23 ft below land-surface datum, June 16, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	33.91	Apr. 24, 1989	33.36

381355085465901. Local number 46-13-34, map number 71.

LOCATION.--Lat 38°13'55", long 85°46'59", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 50 ft southwest of a smokestack, at the Louisville Cooperage Company Plant (formerly Tobacco By-Products and Chemical Company), 1350 South 17th Street, in Louisville. Owner: Louisville Cooperage Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 85 ft, cased and screened.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 458.76 ft above National Geodetic Vertical Datum. Measuring point: Top of steel plate well cover at plug, 1.13 ft above land-surface datum.

PERIOD OF RECORD.--April 1948 to current year. April 1948 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.09 ft below land-surface datum, Apr. 24, 1985; lowest measured, 79.88 ft below land-surface datum, Nov. 1, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	37.66	Apr. 25, 1989	37.36

JEFFERSON COUNTY

381400085445001. Local number CP 6, map number 72.
LOCATION.--Lat 38°14'00", long 85°44'45", Hydrologic Unit 05140101, County Code 111, Louisville East quadrangle, at the northwest corner of Shelby Park, 70 ft south of an alley, 80 ft east of South Jackson Street, 300 ft southeast of the junction of East Oak and South Jackson Streets, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 79.2 ft, screened 52.2-55.2 ft, 76.2-79.2 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 459.26 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.86 ft below land-surface datum, Oct. 30, 1984; lowest measured, 39.95 ft below land-surface datum, July 5, Aug. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	34.67	Apr. 24, 1989	33.35

381406085463001. Local number 1 (south well), 78-1, map number 73.
LOCATION.--Lat 38°14'06", long 85°46'30", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the west edge of United Catalysts, Inc., west plant building, 100 ft southeast of Intersection of 13th and Dumesnil Streets, in Louisville. Owner: United Catalysts, Inc.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused industrial water-table well, diameter 12 in, depth 114 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.14 ft, National Geodetic Vertical Datum. Measuring point: Lower edge of 2 in pipe in concrete pump base, 0.40 ft above land-surface datum.
PERIOD OF RECORD.--May 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.45 ft below land-surface datum, Apr. 23, 1985; lowest measured, 35.63 ft below land-surface datum, May 5, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	31.15	Apr. 25, 1989	30.57

381417085500301. Local number 50-14-4 (RR-23), map number 74.
LOCATION.--Lat 38°14'17", long 85°50'03", Hydrologic Unit 05140101, County Code 111, at the Louisville Refining Company Plant, 1300 South Western Parkway, on top of Ohio River floodwall, 200 ft southeast of a river barge loading dock, in Louisville. Owner: Ashland Oil Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 101 ft, screened 99.5-101.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 453.83 ft, National Geodetic Vertical Datum. Measuring point: Top of plug, 5.60 ft above land-surface datum.
REMARKS.--Water-quality sample collected Feb. 15, 1945.
PERIOD OF RECORD.--February 1945 to current year. February 1945 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.22 ft below land-surface datum, Apr. 26, 1984; lowest measured, 77.08 ft below land-surface datum, Dec. 17, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	56.55	Apr. 25, 1989	50.93

JEFFERSON COUNTY

381424085454602. Local number CP 12A, map number 75.
LOCATION.--Lat 38°14'24", long 85°45'46", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the southwest corner of Ben F. Washer Park, 23.0 ft north of curb on west Kentucky Street, 38.0 ft east of curb on south Sixth Street, 45.5 ft northwest of a fire plug, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 91.0 ft, screened 74.5-76.5 ft, 87.0-91.0 ft.
INSTUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.72 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
REMARKS.--Replaces destroyed well 381424085454601 (CP-12), which was 20 ft north.
PERIOD OF RECORD.--October 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.36 ft below land-surface datum, Oct. 30, 1984; lowest measured, 32.56 ft below land-surface datum, Oct. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	32.56	Apr. 24, 1989	31.65

381428085485701. Local number 78-6, map number 76.
LOCATION.--Lat 38°14'28", long 85°48'57", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at Virginia Avenue, I-264 South Exit, 19 ft east of curb on east side of exit road, 24 ft southeast of south end of a metal guardrail, 100 ft north of curb on north edge of Virginia Avenue, in Louisville. Owner: Kentucky Highway Department.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 98 ft, screened 96-98 ft.
INSTRUMENTATION.--Bi-annaul measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 440.28 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--February 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.58 ft below land-surface datum, Apr. 24, 1985; lowest measured, 29.75 ft below land-surface datum, Dec. 13, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	28.27	Apr. 25, 1989	27.00

381430085452602. Local number 45-14-69 (owner's number 3), map number 77.
LOCATION.--Lat 38°14'30", long 85°45'26", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in subbasement of the Cosmopolitan Building, 100 ft east of the junction of 3rd and West Kentucky Streets, in Louisville. Owner: Conna Corporation.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in, depth 88 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.45 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 11.50 ft below land-surface datum.
PERIOD OF RECORD.--December 1943 to current year. December 1943 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.89 ft below land-surface datum, Oct. 30, 1984; lowest measured, 73.89 ft below land-surface datum, Nov. 4, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	31.08	Apr. 24, 1989	30.05

JEFFERSON COUNTY

381430085472501. Local number CP-17, map number 78.
LOCATION.--Lat 38°14'30", long 85°47'25", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 21 ft west of the west curb on 22nd Street, 45 ft north of north curb on Greenwood Street, at the southeast corner of Victory Park, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 86.0 ft, screened 84.0-86.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 451.78 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--March 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.20 ft below land-surface datum, Apr. 23, 1985; lowest measured, 29.96 ft below land-surface datum, Oct. 25, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 25, 1988	29.96	Apr. 24, 1989	28.63

381441085465301. Local number 46-14-13, (owner's number 3), map number 79.
LOCATION.--Lat 38°14'41", long 85°46'53", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, in a brick pump house at the Bernheim Distillery, 400 ft northwest of the junction of 17th and West Breckinridge Streets, in Louisville. Owner: Bernheim Distilling Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 16 in, depth 111 ft, cased and screened.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 451.59 ft above National Geodetic Vertical Datum. Measuring point Top of casing, 0.72 ft above land-surface datum.
REMARKS.--Water levels affected by pumping from nearby wells.
PERIOD OF RECORD.--October 1949 to current year. October 1949 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.00 ft below land-surface datum, Apr. 24, 1985; lowest measured, 79.96 ft below land-surface datum, Oct. 5, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

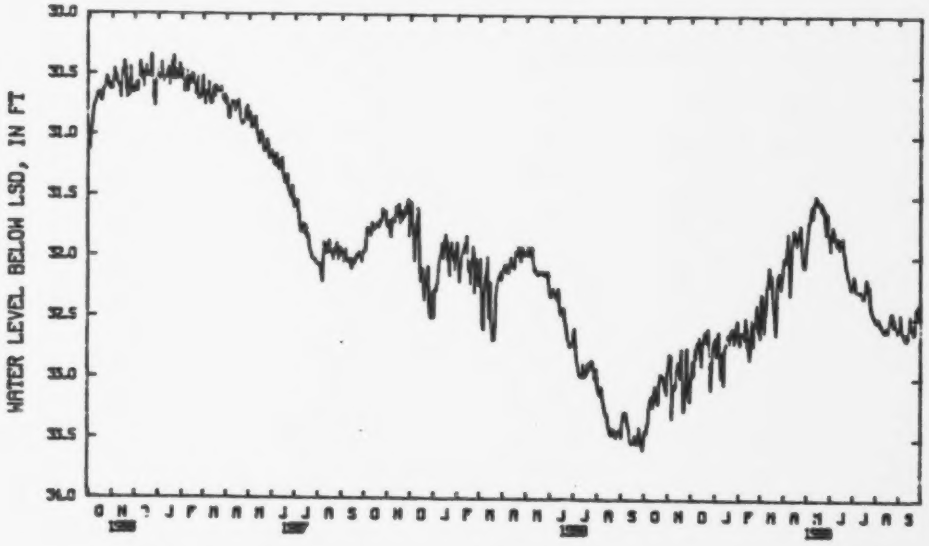
Date	Water level	Date	Water level
Oct. 17, 1988	28.80	Apr. 24, 1989	28.56

JEFFERSON COUNTY

381441085452701. Local number 45-14-71, (owner's number A-2), map mnumber 80.
LOCATION.--Lat 38°14'41", long 85°45'27", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at the Louisville Free Public Library, 301 West York Street, on east side of building at base of the TV-radio tower, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 105 ft, cased and screened.
INSTRUMENTATION.--Digital recorder -- 60-minute punch.
DATUM.--Elevation of land-surface datum is 454.23 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.00 ft above land-surface datum.
REMARKS.--Water-quality sample collected May 8, 1956.
PERIOD OF RECORD.--February 1937 to current year. February 1937 to September 1976 published in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 28.09 ft below land-surface datum, May 20, 1984; lowest, 77.82 ft below land-surface datum, Sept. 18, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33.50	32.94	33.01	32.69	32.62	32.67	32.11	31.94	31.89	32.26	32.52	32.60
2	33.43	32.95	32.98	32.66	32.73	32.64	32.01	31.87	31.94	32.22	32.53	32.59
3	33.44	32.86	32.85	32.82	32.72	32.34	32.00	31.84	31.80	32.15	32.53	32.53
4	33.45	32.80	32.92	32.81	32.70	32.30	32.04	31.78	31.84	32.18	32.50	32.46
5	33.42	32.81	32.97	32.67	32.61	32.32	32.02	31.71	31.74	32.22	32.50	32.54
6	33.37	32.82	32.81	32.62	32.63	32.50	31.93	31.70	31.78	32.27	32.52	32.61
7	33.36	33.33	32.75	32.61	32.62	32.62	31.88	31.65	31.79	32.28	32.56	32.63
8	33.26	33.12	32.83	32.88	32.62	32.45	31.80	31.59	31.85	32.28	32.54	32.63
9	33.19	33.07	32.77	33.00	32.68	32.47	32.16	31.57	31.85	32.28	32.55	32.66
10	33.17	33.05	32.70	32.82	32.58	32.39	32.31	31.67	31.90	32.28	32.58	32.62
11	33.15	33.08	32.74	32.91	32.50	32.23	32.13	31.60	31.84	32.29	32.59	32.67
12	33.22	33.04	32.72	32.77	32.73	32.23	31.96	31.54	31.83	32.27	32.60	32.68
13	33.24	32.94	32.66	33.05	32.57	32.14	31.89	31.54	31.86	32.27	32.61	32.66
14	33.13	32.89	32.89	32.75	32.73	32.08	31.85	31.49	31.93	32.30	32.61	32.65
15	33.11	32.86	32.90	32.72	32.81	32.23	31.77	31.54	31.88	32.33	32.57	32.58
16	33.06	32.90	32.77	32.73	32.84	32.24	31.79	31.51	31.87	32.32	32.58	32.50
17	33.08	33.00	32.70	32.66	32.75	32.14	31.79	31.56	31.85	32.33	32.60	32.47
18	33.20	32.95	32.67	32.63	32.60	32.22	31.82	31.55	31.82	32.29	32.61	32.54
19	33.17	32.81	32.64	32.65	32.51	32.36	31.90	31.56	31.91	32.19	32.56	32.59
20	33.21	32.76	32.61	32.66	32.57	32.49	31.86	31.54	31.96	32.17	32.52	32.59
21	33.05	33.18	32.69	32.71	32.73	32.59	31.85	31.61	31.98	32.20	32.53	32.63
22	33.02	33.27	32.70	32.61	32.55	32.64	31.83	31.56	32.04	32.27	32.47	32.55
23	32.96	33.24	32.66	32.59	32.56	32.49	31.77	31.59	32.09	32.26	32.45	32.62
24	32.97	33.14	32.59	32.60	32.52	32.22	31.73	31.63	32.11	32.23	32.45	32.52
25	32.98	32.87	32.74	32.58	32.43	32.15	31.87	31.60	32.15	32.36	32.57	32.41
26	33.01	32.76	33.01	32.72	32.39	32.16	32.00	31.73	32.17	32.41	32.52	32.41
27	32.98	32.75	33.09	32.68	32.62	32.12	32.06	31.81	32.18	32.45	32.50	32.48
28	33.03	33.14	32.96	32.70	32.51	32.21	32.08	31.73	32.22	32.46	32.56	32.39
29	33.09	33.17	32.86	32.62	---	32.26	32.08	31.63	32.26	32.48	32.57	32.42
30	33.03	33.19	32.73	32.56	---	32.20	32.03	31.75	32.25	32.48	32.60	32.40
31	33.14	---	32.69	32.52	---	32.14	---	31.84	---	32.50	32.62	---
MAX	33.50	33.33	33.09	33.05	32.84	32.67	32.31	31.94	32.26	32.50	32.62	32.68
MIN	32.96	32.75	32.59	32.52	32.39	32.08	31.73	31.49	31.74	32.15	32.45	32.39



JEFFERSON COUNTY

381447085454001. Local number 45-14-66, (owner's number 5), map number 81.

LOCATION.--Lat 38°14'47", long 85°45'40", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at Courier Journal-Louisville Times, Sixth and Broadway Streets in subbasement below building entrance walkway from Armory Street, in Louisville. Owner: Gannett.

AQUIFER.--Louisville Limestone and Laurel Dolomite of Middle Silurian age. Aquifer code: 354LVLL.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 12 in, depth 190 ft, cased to 121 ft, open-hole 121-190 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 455.83 ft above National Geodetic Vertical Datum. Measuring point: Top of metal well cover, 15.87 ft below land-surface datum.

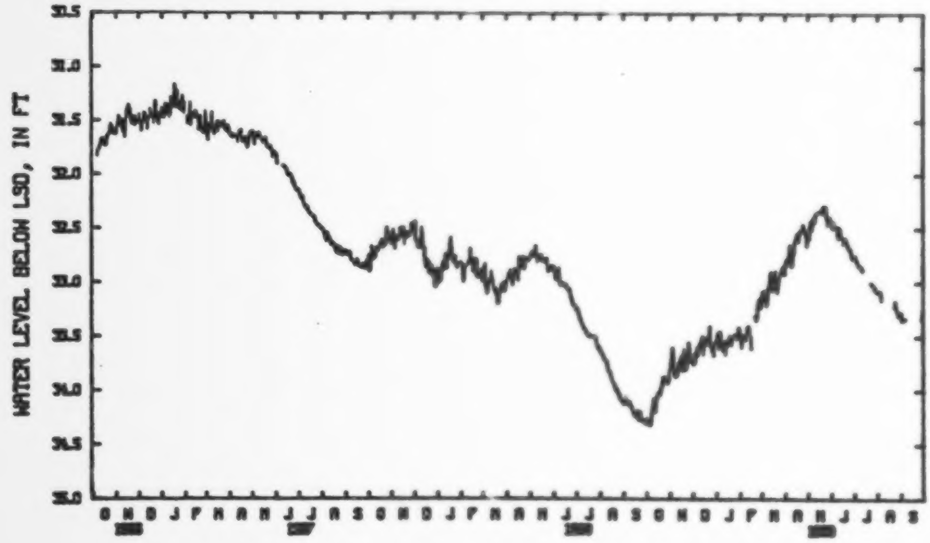
REMARKS.--Earthquake monitor well. Water-quality samples collected Aug. 29, 1949 and Aug. 18, 1950.

PERIOD OF RECORD.--October 1953 to current year. October 1953 to September 1976 published in hydrograph form and on file at district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 28.80 ft below land-surface datum, June 2, 1984; lowest, 86.85 ft below land-surface datum, Sept. 20, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.27	33.80	33.76	33.54	33.45	33.23	32.92	32.58	32.47	32.78	33.09	33.31
2	34.25	33.80	33.75	33.53	33.54	33.14	32.83	32.59	32.49	32.78	33.09	33.28
3	34.29	33.71	33.65	33.46	33.60	33.08	32.79	32.59	32.43	32.75	33.09	33.35
4	34.30	33.67	33.74	33.62	33.56	33.10	32.78	32.49	32.50	32.79	33.08	33.35
5	34.32	33.60	33.67	33.51	33.48	33.11	32.83	32.43	32.44	32.80	33.08	33.33
6	34.32	33.73	33.62	33.45	33.51	33.07	32.76	32.51	32.48	32.82	33.12	33.34
7	34.27	33.87	33.59	33.48	33.50	33.20	32.71	32.48	32.48	32.84	33.16	33.33
8	34.22	33.82	33.67	33.57	33.53	33.21	32.65	32.42	32.48	32.84	---	---
9	34.15	33.87	33.62	33.63	33.53	33.18	32.82	32.39	32.49	32.85	---	---
10	34.12	33.82	33.56	33.62	33.46	33.10	32.85	32.44	32.58	32.86	---	---
11	34.07	33.85	33.61	33.62	33.41	33.03	32.82	32.42	32.59	32.86	---	---
12	34.15	33.74	33.57	33.53	33.46	33.05	32.73	32.36	32.49	32.87	---	---
13	34.20	33.79	33.53	33.67	33.40	32.95	32.72	32.35	32.51	32.89	---	---
14	34.13	33.76	33.49	33.54	33.50	32.90	32.63	32.34	32.58	---	---	---
15	34.07	33.70	33.67	33.55	33.50	33.04	32.60	32.34	---	---	---	---
16	34.03	33.67	33.59	33.58	33.61	33.08	32.59	32.34	---	---	---	---
17	34.02	33.82	33.55	33.52	---	32.96	32.55	32.35	32.64	---	---	---
18	34.01	33.81	33.53	33.48	---	33.02	32.54	32.33	32.59	---	---	---
19	34.04	33.69	33.52	33.52	---	33.02	32.62	32.31	32.59	---	---	---
20	34.00	33.61	33.50	33.51	---	32.89	32.56	32.32	32.60	---	---	---
21	33.96	33.80	33.58	33.58	33.31	33.03	32.53	32.36	32.61	---	---	---
22	33.96	33.80	33.56	33.50	33.32	33.09	32.51	32.29	32.64	---	33.22	---
23	33.87	33.78	33.55	33.49	33.35	33.02	32.52	32.32	32.66	---	---	---
24	33.90	33.74	33.40	33.48	33.31	32.97	32.49	32.31	32.68	33.00	33.23	---
25	33.89	33.70	33.63	33.47	33.20	32.94	32.46	32.29	32.69	33.01	33.17	---
26	33.91	33.55	33.60	33.50	33.15	32.93	32.50	32.37	32.69	33.03	33.22	---
27	33.87	33.62	33.58	33.53	33.15	32.90	32.52	32.47	32.71	33.03	33.26	---
28	33.93	33.70	33.68	33.51	33.17	32.87	32.51	32.46	32.74	33.03	33.27	33.34
29	33.93	33.72	33.67	33.48	---	32.87	32.57	32.40	32.78	33.07	33.31	33.32
30	33.89	33.73	33.55	33.45	---	32.85	32.66	32.39	32.77	33.05	33.27	33.29
31	33.89	---	33.53	33.41	---	32.92	---	32.43	---	33.08	33.31	---
MAX	34.32	33.87	33.76	33.67	---	33.23	32.92	32.59	---	---	---	---
MIN	33.87	33.55	33.40	33.41	---	32.85	32.46	32.29	---	---	---	---



JEFFERSON COUNTY

381453085474501. Local number 47-14-10, (east well), map number 82.
LOCATION.--Lat 38°14'53", long 85°47'45", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 150 ft east of Kroger store, 10 ft south of parking lot curb, on fence line, 900 ft southeast of the junction of West Broadway and 28th Street, in Louisville. Owner: Kroger Corporation.
AQUIFER.--Louisville Limestone of Middle Silurian age. Aquifer code: 354LVLG.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 204 ft, cased to 65 ft, open hole 65-204 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 452.89 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--January 1944 to current year. January 1944 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.27 ft below land-surface datum, Oct. 30, 1985; lowest measured, 76.66 ft below land-surface datum, June 15, 1961.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	28.96	Apr. 24, 1989	28.43

381500085454701. Local number 78-5, map number 84.
LOCATION.--Lat 38°15'00", long 85°45'47", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, 1 ft south of concrete walkway curb, 50 ft northwest of northwest corner of Bell Telephone Company office building, 50 ft east of South Seventh Street, 200 ft north of West Chestnut Street, in Louisville. Owner: South Central Bell Telephone Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 87 ft, screened 85-87 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 459.11 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--October 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.44 ft below land-surface datum, Apr. 24, 1984; lowest measured, 39.39 ft below land-suface datum, Oct. 24, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	38.94	Apr. 24, 1989	37.03

381501085464601. Local number CP 10, map number 85.
LOCATION.--Lat 38°15'01", long 85°46'46", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the center of the west side of Sheppard Park, 10 ft south of a concrete walkway, 17 ft east of South 17th Street, 150 ft north of the junction of Magazine and South 17th Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 59.0 ft, screened 56.0-59.0 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 460.73 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--August 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.65 ft below land-surface datum, Oct. 31, 1984; lowest measured, 45.14 ft below land-surface datum, Aug. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	38.55	Apr. 24, 1989	37.84

JEFFERSON COUNTY

381503085452601. Local number 5, map number 87.
LOCATION.--Lat 38°15'03", long 85°45'26", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, in basement under truck loading dock at Stewart's Dry Goods Company, 501 Fourth Avenue in Louisville. Owner: Stewart's Dry Goods Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 20 in, depth 124 ft, cased to 103 ft, screened 103-124 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 461.54 ft above National Geodetic Vertical Datum. Measuring point: Bottom edge of a slanted 2 in access pipe in concrete pump base, 12.00 ft below land-surface datum.
REMARKS.--Water-quality samples collected Aug. 8, 1978 to Aug. 21, 1980.
PERIOD OF RECORD.--March 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.83 ft below land-surface datum, Apr. 24, 1984; lowest measured, 40.59 ft below land-surface datum, Oct. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	40.59	Apr. 24, 1989	38.22

381503085453301. Local number 45-15-36, map number 86.
LOCATION.--Lat 38°15'03", long 85°45'33", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, in subbasement of Kentucky Towers Apartments, on east side of South Fifth Street, at Fifth and Walnut Streets, in Louisville. Owner: Kentucky Towers (formerly Kentucky Hotel).
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in, depth 104 ft, screened 84-104 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 460.00 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter 22.81 ft below land-surface datum.
PERIOD OF RECORD.--September 1948 to current year. November 1973 to September 1976 published in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.53 ft below land-surface datum, Apr. 24, 1984; lowest measured, 87.74 ft below land-surface datum, Sept. 23, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	39.20	Apr. 24, 1989	36.93

381504085443202. Local number CP 7A, map number 88.
LOCATION.--Lat 38°15'04", long 85°44'32", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, at the southwest corner of east Louisville Park, 13.7 ft west of a tennis court fence, 16.5 ft east of curb on south Hancock Street, 58.2 ft north of curb on east Liberty Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 84.6 ft, screened 71.1-74.1 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 467.19 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
REMARKS.--Replaces destroyed well 381504085443201 (CP 7), which was 10 ft north.
PERIOD OF RECORD.--July 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.42 ft below land-surface datum, Apr. 24, 1984; lowest measured, 47.02 ft below land-surface datum, Oct. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	47.02	Apr. 24, 1989	45.18

JEFFERSON COUNTY

381505085475701. Local number CP 5, map number 89.
LOCATION.--Lat 38°15'05", long 85°47'57", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the southwest corner of Elliott Square Park, 35 ft east of South 28th Street, 100 ft north of Elliott Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 81.5 ft, screened 65.0-68.0, 78.5-81.5 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 452.86 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.91 ft below land-surface datum, Apr. 24, 1985; lowest measured, 39.93 ft below land-surface datum, July 5, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	33.51	Apr. 24, 1989	33.15

381508085455701. Local number CP 4, map number 90.
LOCATION.--Lat 38°15'08", long 85°45'57", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the southwest corner of Beecher Park, 15 ft west of the South 9th Street sidewalk, 20 ft north of the Walnut Street sidewalk, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 109.8 ft, screened 106.8-109.8 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 459.47 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.43 ft below land-surface datum, Apr. 24, 1984; lowest measured, 43.31 ft below land-surface datum, Aug. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	38.80	Apr. 24, 1989	37.23

JEFFERSON COUNTY

381514085453502. Local number, CP 11A, map number 91.

LOCATION.--Lat 38°15'14", long 85°45'35", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the northwest corner of Jefferson Square Park at Sixth and Jefferson Streets, 52 ft south of the Jefferson Street curb, 16.5 ft west of driveway retaining wall, 2 ft east of sidewalk, across the street from the Jefferson County Courthouse, in Louisville. Owner: Jefferson County.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 108.0 ft, screened 106.0-108.0 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 461.52 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 3.10 ft above land-surface datum.

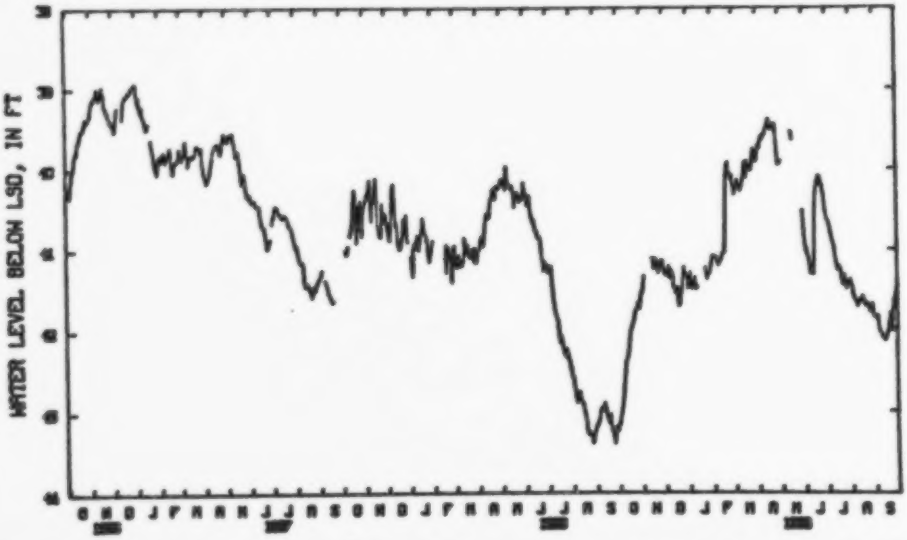
REMARKS.--Recorder shelter has two plexi-glass panels for public exhibit of water level recording equipment.

PERIOD OF RECORD.--May 1984 to current year. Replaced destroyed well 381514085453501 (CP 11), which was 25 ft west.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 35.62 ft below land-surface datum, May 20, 1984; lowest, 43.39 ft below land-surface datum, Aug. 27, Sept. 25, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43.16	41.51	41.30	41.44	41.09	40.24	39.89	39.93	40.63	40.62	41.43	41.85
2	43.13	41.53	41.31	41.36	41.07	40.32	39.80	39.90	40.80	40.65	41.45	41.85
3	43.06	41.46	41.25	41.28	41.09	40.29	39.71	---	40.92	40.66	41.49	41.85
4	43.01	41.33	41.33	41.47	41.10	40.22	39.75	---	41.02	40.71	41.54	41.82
5	42.95	---	41.25	41.46	41.09	40.21	39.74	---	40.98	40.73	41.60	41.82
6	42.90	---	41.20	41.49	41.10	40.13	39.66	---	41.06	40.79	41.59	41.88
7	42.82	---	41.24	41.44	41.13	40.17	39.60	---	41.08	40.83	41.63	41.98
8	42.71	---	41.35	41.42	41.16	40.19	39.60	---	41.13	40.89	41.66	42.02
9	42.61	---	41.35	41.34	41.20	40.25	39.64	---	41.22	40.92	41.65	42.04
10	42.49	---	41.26	41.44	41.14	40.28	39.60	---	41.30	40.95	41.71	42.05
11	42.39	---	41.31	41.49	41.14	40.22	39.57	---	41.29	41.00	41.67	42.09
12	42.35	---	41.36	41.46	41.13	40.21	39.58	---	41.19	41.10	41.62	42.10
13	42.32	---	41.48	---	41.11	40.14	39.51	---	41.25	41.15	41.63	42.10
14	42.26	---	41.47	---	41.05	40.09	39.50	---	41.31	41.22	41.66	42.09
15	42.20	41.10	41.54	---	41.04	39.99	39.46	---	41.04	41.26	41.64	42.13
16	42.11	41.13	41.51	---	41.04	39.91	39.46	39.54	40.46	41.20	41.58	42.10
17	42.01	41.24	41.47	---	41.03	40.05	39.39	39.56	40.31	41.22	41.61	42.06
18	41.97	41.23	41.47	---	40.87	40.11	39.40	39.64	40.21	41.24	41.64	42.02
19	41.94	41.21	41.65	---	40.30	40.01	39.52	---	40.15	41.27	41.68	41.99
20	41.92	41.11	41.70	---	40.02	39.90	39.45	---	40.21	41.34	41.67	41.92
21	41.87	41.22	41.66	---	39.96	40.01	39.45	---	40.09	41.41	41.71	41.88
22	41.86	41.24	41.56	---	39.92	40.00	39.48	---	40.11	41.44	41.67	41.78
23	41.77	41.29	41.50	41.22	40.04	40.03	39.52	---	40.14	41.38	41.69	41.86
24	41.74	41.24	41.48	41.31	40.05	40.01	39.45	---	40.19	41.32	41.71	42.01
25	41.72	41.19	41.33	41.37	40.13	40.00	39.45	---	40.23	41.41	41.74	41.83
26	41.72	41.13	41.21	41.29	40.09	39.92	39.52	---	40.28	41.45	41.78	41.61
27	41.65	41.20	41.30	41.30	40.08	39.80	39.66	---	40.30	41.49	41.75	41.70
28	41.66	41.13	41.33	41.30	40.17	39.75	39.80	---	40.40	41.45	41.73	41.60
29	41.73	41.17	41.30	41.27	---	39.77	39.95	---	40.50	41.42	41.67	41.55
30	41.65	41.28	41.34	41.21	---	39.81	39.95	---	40.58	41.39	41.78	41.49
31	41.55	---	41.48	41.16	---	39.91	---	40.52	---	41.37	41.83	---
MAX	43.16	---	41.70	---	41.20	40.32	39.95	---	41.31	41.49	41.83	42.13
MIN	41.55	---	41.20	---	39.92	39.75	39.39	---	40.09	40.62	41.43	41.49



JEFFERSON COUNTY

381536085492801. Local number CP 2, map number 92.
LOCATION.--Lat 38°15'36", long 85°49'28", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the northeast corner of Shawnee Park, 62 ft south of Southwestern Parkway, 200 ft west of Southwestern Parkway, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 90.6 ft, screened 53.1-56.1, 87.6-90.6 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.05 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.75 ft below land-surface datum, Apr. 15, 1980; lowest measured, 48.84 ft below land-surface datum, Sept. 22, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	47.21	Apr. 25, 1989	44.26

381538085434401. Local number 78-7, map number 93.
LOCATION.--Lat 38°15'38", long 85°43'44", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, on the north side of Adams Street, near the center of a long curve from south to northwest, 5 ft north of curb on north side of Adams Street, 9 ft west of a power line brace pole, 150 ft south of I-64, 400 ft north of Koch Beef Company building, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 77 ft, screened 75-77 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.-Elevation of land-surface datum is 435.75 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.75 ft below land-surface datum, Dec. 15, 1978; lowest measured, 17.91 ft below land-surface datum, Oct. 17, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	17.91	Apr. 24, 1989	15.82

381539085465201. Local number CP 9, map number 94.
LOCATION.--Lat 38°15'39", long 85°46'52", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the southeast corner of Boone Square Park. 20 ft north of Rowan Street, 150 ft west of South 19th Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 42.7 ft, screened 39.7-42.7 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 456.99 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.38 ft below land-surface datum, Apr. 24. 1985; lowest measured, 40.51 ft below land-surface datum, July 12, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	35.29	Apr. 25, 1989	34.27

JEFFERSON COUNTY

381543085480101. Local number CP 14, map number 96.
LOCATION.--Lat 38°15'43", long 85°48'01", Hydroloic Unit 05140101, County Code 111, New Albany quadrangle, at the southwest corner of Westonia Park, South 30th Street at an unnamed alley south of Rowan Street, 5 ft north of curb on north side of alley, 8 ft east of a telephone pole at the curb on east side of South 30th Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 45 ft, screened 43-45 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.71 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--July 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.35 ft below land-surface datum, Aug. 25, 1980; lowest measured, 36.13 ft below land-surface datum, Dec. 13, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	35.89	Apr. 25, 1989	34.93

381553085431602. Local number M-2, map number 97.
LOCATION.--Lat 38°15'53", long 85°43'16", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 15 ft west of the northwest corner of Metropolitan Sewer District, Beargrass Creek Pump Station Building, 100 ft west of end of Letterle Avenue, 150 ft south of I-71, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 98 ft, screened 96-98 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 446.77 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.93 ft below land-surface datum, Dec. 15, 1978; lowest measured, 28.28 ft below land-surface datum, Nov. 20, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	28.25	Apr. 24, 1989	25.84

381604085430501. Local number 43-16-8, (WC-1), map number 98.
LOCATION.--Lat 38°16'04", long 85°43'05", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 100 ft northeast of junction of River Road and entrance road to Bandman Park, 0.2 mi east of Beargrass Creek, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 101 ft, screened 99-101 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 438.88 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.83 ft above land-surface datum.
REMARKS.--Water levels affected by Ohio River. Water-quality samples collected Apr. 2, 1944 and July 10, 1979.
PERIOD OF RECORD.--May 1946 to current year. May 1946 to September 1976 published in hydrograph form and on file at district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 0.09 ft below land-surface datum, Sept. 14, 1979; lowest measured, 27.90 ft below land-surface datum, Feb. 10, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	19.55	Apr. 24, 1989	16.12

JEFFERSON COUNTY

381607085483601. Local number CP 3, map number 99.
LOCATION.--Lat 38°16'07", long 85°48'36", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the northwest corner of Taylor Park, 150 ft east of North 38th Street, 200 ft north of Jewell Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 55.7 ft, screened 52.7-55.7 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 445.33 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.00 ft below land-surface datum, May 19, 1980; lowest measured, 46.67 ft below land-surface datum, June 29, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	35.47	Apr. 25, 1989	33.19

381613085421901. Local number 42-16-18, (WC-14), map number 100.
LOCATION.--Lat 38°16'13", long 85°42'19", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, at the southwest corner of the River Road Country Club golf course, 0.1 mi south of WFIA Radio Tower, 0.6 mi southwest of junction of River Road and Zorn Avenue, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 86 ft, screened 84-86 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 434.59 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 0.83 ft above land-surface datum.
REMARKS.--Water-quality sample collected Jan. 8, 1946.
PERIOD OF RECORD.--June 1946 to current year. June 1946 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.58 ft below land-surface datum, May 5, 1972; lowest measured, 20.63 ft below land-surface datum, Feb. 3, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	13.50	Apr. 24, 1989	8.69

381628085473101. Local number CP 13, map number 101.
LOCATION.--Lat 38°16'28", long 85°47'31", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the northwest corner of Portland Park, 28th Street and Northwestern Parkway, 12 ft south of chain link fence, 24 ft south of curb on south side of Northwestern Parkway, 31 ft east of curb on east side of 28th Street, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.5 in, depth 46 ft, screened 44-46 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 458.68 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.34 ft below land-surface datum, May 1, 1979; lowest measured, 42.34 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	42.34	Apr. 25, 1989	41.43

JEFFERSON COUNTY

381638085415801. Local number 41-16-3, (WC-4), map number 102.

LOCATION.--Lat 38°16'38", long 85°41'58", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, at the northwest corner of River Road and Zorn Avenue, in Louisville. Owner: Louisville Water Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 104 ft, screened 98-100 ft.

INSTRUMENTATION.--Digital recorder -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 435.79 ft above National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.41 ft above land-surface datum.

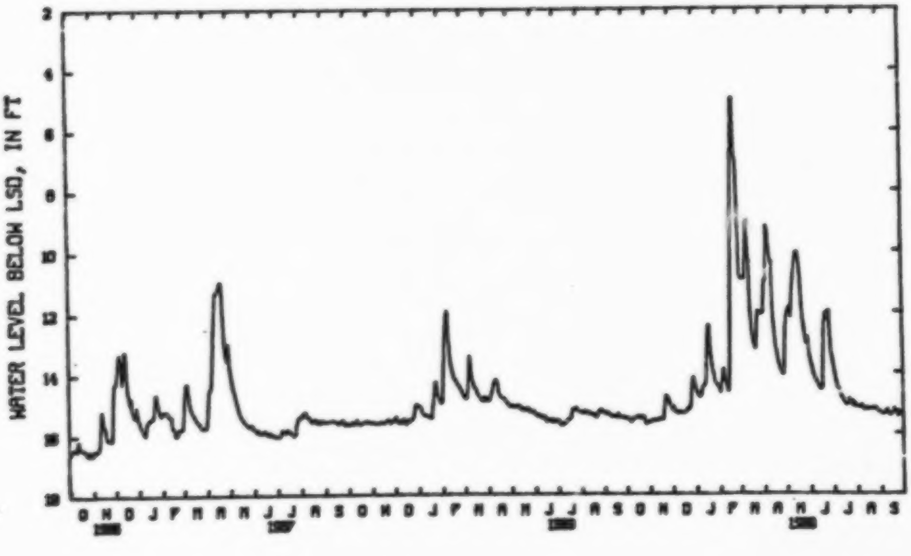
REMARKS.--Water levels affected by Ohio River, which causes level to rise above land surface. Water-quality sample collected July 10, 1979.

PERIOD OF RECORD.--April 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level observed, 2.25 ft above land-surface datum, May 19, 1984; lowest, 19.61 ft below land-surface datum, Feb. 13, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.52	15.62	15.25	14.62	14.54	10.78	12.08	12.44	13.47	13.76	15.16	15.34
2	15.51	15.59	15.23	14.65	14.67	10.93	11.66	12.15	13.67	13.95	15.17	15.38
3	15.49	15.64	15.14	14.68	14.57	10.93	11.19	12.02	13.77	14.11	15.18	15.39
4	15.52	15.60	15.31	14.78	14.33	10.93	10.96	11.98	13.89	14.28	15.14	15.41
5	15.56	15.52	15.33	14.77	14.19	10.93	10.96	11.87	14.04	14.34	15.11	15.41
6	15.57	15.56	15.30	14.83	13.89	10.93	9.18	11.88	14.07	14.48	15.13	15.39
7	15.64	15.58	15.33	14.75	13.89	10.93	9.34	12.16	14.18	14.54	15.08	15.28
8	15.65	15.56	15.36	14.73	14.14	10.93	9.39	12.22	14.22	14.56	15.14	15.28
9	15.52	15.55	15.29	14.56	14.30	10.24	9.81	11.67	14.30	14.65	15.22	15.26
10	15.47	15.60	15.27	14.47	14.41	9.39	10.03	11.27	14.36	14.75	15.25	15.21
11	15.51	15.55	15.33	14.45	14.53	9.01	10.33	11.03	14.38	14.75	15.20	15.41
12	15.52	15.53	15.35	14.42	14.62	9.62	10.39	10.81	14.45	14.84	15.27	15.43
13	15.50	15.57	15.31	14.41	14.63	10.35	10.40	10.53	14.50	14.89	15.22	15.41
14	15.46	15.57	15.29	14.30	14.38	10.35	12.02	10.30	14.57	14.88	15.16	15.46
15	15.46	15.49	15.35	13.80	13.67	11.96	12.39	10.11	14.53	14.97	15.23	15.38
16	15.44	15.51	15.31	13.13	12.35	12.29	12.67	10.06	14.58	15.01	15.21	15.33
17	15.41	15.52	15.31	12.68	10.77	12.57	12.93	10.09	14.51	15.08	15.21	15.39
18	15.47	15.55	15.31	12.45	8.89	12.87	13.24	10.20	13.64	15.07	15.25	15.22
19	15.53	15.56	15.28	12.51	7.02	13.05	13.33	10.35	12.93	15.10	15.21	15.19
20	15.54	15.36	15.21	13.22	5.36	13.14	13.53	10.61	12.39	15.03	15.23	15.28
21	15.51	15.16	15.18	13.57	4.97	13.23	13.66	11.07	12.07	15.04	15.19	15.33
22	15.47	15.01	15.15	13.76	4.97	13.23	13.75	11.74	12.07	14.89	15.16	15.29
23	15.43	14.78	15.22	13.95	6.33	12.84	13.89	12.22	12.28	14.98	15.15	15.47
24	15.47	14.81	15.15	14.03	6.99	12.22	13.93	12.41	12.23	15.01	15.18	15.46
25	15.54	14.87	15.06	14.20	6.99	12.00	14.00	12.58	12.01	15.06	15.25	15.35
26	15.65	14.95	14.78	14.33	7.56	12.07	14.06	12.92	11.99	14.97	15.18	15.26
27	15.70	15.00	14.35	14.38	8.54	12.08	14.08	13.06	12.49	15.14	15.24	15.35
28	15.71	15.08	14.22	14.39	9.85	12.08	14.05	13.01	13.17	15.15	15.27	15.36
29	15.66	15.06	14.16	14.44	---	12.08	13.77	12.85	13.46	15.04	15.32	15.41
30	15.62	15.12	14.36	14.47	---	12.08	12.89	13.02	13.61	15.08	15.28	15.49
31	15.61	---	14.50	14.49	---	12.08	---	13.25	---	15.12	15.35	---
MAX	15.71	15.64	15.36	14.83	14.67	13.23	14.08	13.25	14.58	15.15	15.35	15.49
MIN	15.41	14.78	14.16	12.45	4.97	9.01	9.18	10.06	11.99	13.76	15.08	15.19



JEFFERSON COUNTY

381648085421201. Local number 42-16-15, (WC-5), map number 103.
LOCATION.--Lat 38°16'48", long 85°42'12", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 200 ft west of Louisville Water Company pump house, 200 ft south of the Ohio River, 0.2 mi northwest of junction of River Road and Zorn Avenue, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 4 in, depth 98 ft, screened 96-98 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 435.11 ft above National Geodetic Vertical Datum. Measuring point: Top of pipe flange, 2.21 ft above land-surface datum.
REMARKS.--Water levels affected by Ohio River, which causes level to rise above land surface. Water quality collected Apr. 30, 1948.
PERIOD OF RECORD.--May 1946 to current year. May 1946 to April 1977 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.04 ft above land-surface datum, Jan. 17, 1950; lowest measured, 18.31 ft below land-surface datum, Nov. 6, 1946.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	14.87	Apr. 24, 1989	13.14

381653085413302. Local number (WC-9A), map number 104.
LOCATION.--Lat 38°16'53", long 85°41'33", Hydrograph Unit 05140101, County Code 111, Jeffersonville quadrangle, 45 ft east of River Road at Wagner Lane, opposite the southwest corner of Cox Park, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.5 in, depth 90 ft, screened 76-78 ft, 88-90 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 437.65 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.00 ft above land-surface datum.
PERIOD OF RECORD.--December 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.04 ft below land-surface datum, Apr. 21, 1987; lowest measured, 19.04 ft below land-surface datum, July 21, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	17.74	Apr. 24, 1989	16.63

381701085414002. Local number (WC-8A), map number 105.
LOCATION.--Lat 38°17'01", long 85°41'40", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, on the south bank of the Ohio River at the northwest corner of Cox Park, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.5 in, depth 96 ft, screened 92-96 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 432.58 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.00 ft above land-surface datum.
REMARKS.--Replaces well 381702085414001 (WC-8) which was 100 ft north. Water levels affected by Ohio River.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.38 ft below land-surface datum, Mar. 21, 1982; lowest measured, 14.35 ft below land-surface datum, Oct. 18, 1980.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	12.77	Apr. 24, 1989	12.35

JEFFERSON COUNTY

381722085405801. Local number 40-17-3, (WC-11), map number 106.

LOCATION.--Lat 38°17'22", long 85°40'58", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, near a mulberry tree on south bank of Ohio River, 50 ft north of the intersection of River Road and Indian Hills Trail, in Louisville. Owner: Louisville Water Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 103 ft, screened 101-103 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 433.50 ft above National Geodetic Vertical Datum. Measuring point: Top of pipe flange, 2.84 ft above land-surface datum.

REMARKS.--Water levels affected by Ohio River, which causes level to rise above land surface.

PERIOD OF RECORD.--May 1946 to current year. May 1946 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.93 ft above land-surface datum, Dec. 13, 1978; lowest measured, 16.46 ft, below land-surface datum, Feb. 3, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	13.30	Apr. 24, 1989	13.18

381742085402001. Local number 40-17-5, (WC-13), map number 107.

LOCATION.--Lat 38°17'42", long 85°40'20", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 30 ft east of River Road, 300 ft northeast of junction of River Road and Blankenbaker Lane, in Louisville. Owner: Louisville Water Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 106 ft, screened 104-106 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 438.87 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 3.07 ft above land-surface datum.

PERIOD OF RECORD.--June 1946 to current year. June 1946 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.28 ft below land-surface datum, Jan. 18, 1950; lowest measured, 19.75 ft below land-surface datum, Jan. 29, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	18.65	Apr. 24, 1989	17.27

381827085392401. Local number 39-18-1, (WC-26), map number 108.

LOCATION.--Lat 38°18'27", long 85°39'24", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 20 ft east of River Road, opposite River Valley Club in Louisville. Owner: Louisville Water Company.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 130 ft, screened 128-130 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 455.94 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 4.68 ft above land-surface datum.

PERIOD OF RECORD.--July 1946 to current year. July 1946 to November 1976 published in hydrograph form and on file at the district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.93 ft below land-surface datum, Jan. 18, 1950; lowest measured, 38.53 ft below land-surface datum, Feb. 3, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	34.23	Apr. 24, 1989	33.98

JEFFERSON COUNTY

381904085384801. Local number 38-19-2, (WC-27), map number 109.
LOCATION.--Lat 38°19'04", long 85°38'48", Hydrologic Unit 05140101, County Code 111, Jeffersonville quadrangle, 30 ft west of River Road, 250 ft north of north end of bridge over Goose Creek, in Louisville. Owner: Louisville Water Company.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in, depth 96 ft, screened 94-96 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 438.46 ft above National Geodetic Vertical Datum. Measuring point: Top of plug, 2.29 ft above land-surface datum.
PERIOD OF RECORD.--August 1946 to current year. August 1946 to November 1976 published in hydrograph form and on file at the district office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.84 ft below land-surface datum, Jan. 14, 1950; lowest measured, 20.97 ft below land-surface datum, Feb. 3, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 17, 1988	18.06	Apr. 24, 1989	18.00

380458085523201. Local number 86-4, map number 110.
LOCATION.--Lat 38°04'58", long 85°52'32", Hydrologic Unit 05140101, County Code 111, Kosmosdale quadrangle, southeast of the first 90° curve on Deering Road off of Dixie Highway, 26' north of ashtree, and 10' east along ditch. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 45.4 ft, screened 43-45 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 437.71 ft above National Geodetic Vertical Datum. Measuring point: Top of casing at ground level.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.29 ft below land-surface datum, Oct. 20, 1986; lowest measured, 31.60 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	31.60	Apr. 26, 1989	30.31

380619085512301. Local number 86-3, map number 111.
LOCATION.--Lat 38°06'19", long 85°51'23", Hydrologic Unit 05140101, County Code 111, Valley Station quadrangle, northwest side of Valley Station and Grafton Hall Roads, 21.0 ft northwest of north corner of drain, and 17.4 ft northeast of telephone pole. Owner: Metropolitan Sewer District.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 55 ft, screened 52-55 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 455.03 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.20 ft above land-surface datum.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.14 ft below land-surface datum, Oct. 23, 1986; lowest measured, 38.90 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	38.90	Apr. 26, 1989	38.65

JEFFERSON COUNTY

380827085503001. Local number 86-5, map number 112.

LOCATION.--Lat 38°08'27", long 85°50'30", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, South of Dixie Highway and Greenwood Road, west on Seibel Court, 17.9 ft east of south corner of culvert wall behind Little Reds Mister Fix It. Owner: Metropolitan Sewer District.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 44 ft, screened 42-44 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 453.75 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.10 ft below land-surface datum, Oct. 23, 1986; lowest measured, 31.70 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	31.70	Apr. 26, 1989	31.48

381011085491601. Local number 86-1, map number 113.

LOCATION.--Lat 38°10'11", long 85°49'16", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, southwest of intersection of Dixie Highway and Rockford Lane, in rear of house at 1601 Brick Brick Kiln Lane, in Louisville. Owner: Jefferson County Tow Service.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 58 ft, screened 56-58 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 459.29 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.75 ft below land-surface datum, Oct. 23, 1986; lowest measured, 34.29 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1987	34.29	Apr. 26, 1989	33.16

381102085485601. Local number 86-2, map number 114.

LOCATION.--Lat 38°11'02", long 85°48'56", Hydrologic Unit 05140101, County Code 111, Louisville West quad quadrangle, enter through Louisville Memorial Park Cemetery, on south bank of Mill Creek behind Korfhage Florist, 18.2 ft southwest of MSD access gate, in Louisville. Owner: Metropolitan Sewer District.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 50 ft, screened 48-50 ft.

INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 450.32 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.02 ft below land-surface datum, Oct. 21, 1986; lowest measured, 24.76 ft below land-surface datum, Oct. 18, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 18, 1988	24.76	Apr. 25, 1989	23.89

JEFFERSON COUNTY

381247085463301. Local number CP 18, map number 115.
LOCATION.--Lat 38°12'47", long 85°46'33", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at Colorado and Tennessee Avenue in the northeast corner of South Central Park, 69 ft east of tree at end of dead-end alley, and 8 ft south of cable posts. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 94 ft, screened 92-94 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 459.89 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.25 ft. below land-surface datum.
PERIOD OF RECORD.--October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.30 ft below land-surface datum, Apr. 23, 1985; lowest measured, 32.87 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	32.87	Apr. 25, 1989	31.40

381246085463201. Local number CP 18A, map number 116.
LOCATION.--Lat 38°12'46", long 85°46'32", Hydrologic Unit 05140101, County Code 111, Louisville West quadrangle, at Colorado and Tennessee Avenue in the northeast corner of South Central Park, 10 ft east of CP18. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 1.5 in, depth 44.3 ft. screened 42-44 ft.
INSTRUMENTATION.--Bi-annual measurement with chalked tape by USGS personnel.
DATUM.--Elevation of land-surface datum is 460.11 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 0.35 ft. below land-surface datum.
PERIOD OF RECORD.--October 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.51 ft below land-surface datum, Apr. 23, 1985; lowest measured, 33.18 ft below land-surface datum, Oct. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water level	Date	Water level
Oct. 19, 1988	33.18	Apr. 25, 1989	31.62

JEFFERSON COUNTY

381517085455501. Local number 86-6 (Roy Wilkins Blvd.), map number 117.

LOCATION.--Lat 38°15'17", long 85°45'55", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at the southwest corner of Roy Wilkins Blvd. and Market Street, in Louisville. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 86.4 ft, screened 82.4-86.4 ft.

INSTRUMENTATION.--Digital recorder installed June 6, 1989 -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 457.59 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.0 ft above land-surface datum.

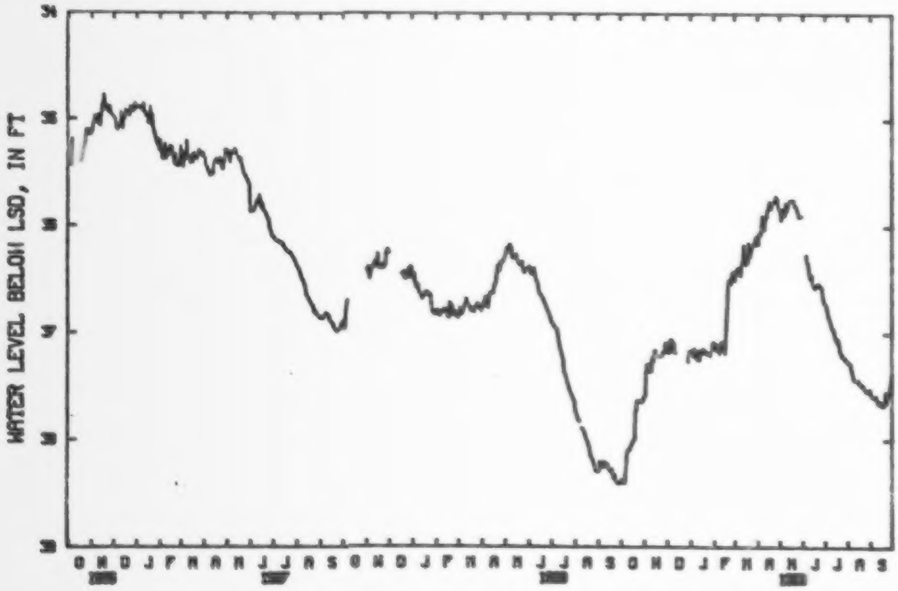
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.77 ft below land-surface datum, Nov. 18, 1986; lowest, 38.41 ft below land-surface datum, Sept. 26, 27, 29, 30, and Oct. 5, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38.37	37.59	37.16	37.17	37.08	36.51	36.17	35.84	---	36.72	37.26	37.52
2	38.37	37.59	37.18	37.18	37.14	36.46	36.16	35.85	---	36.73	37.27	37.57
3	38.39	37.57	37.09	37.16	37.17	36.41	36.07	35.94	---	36.74	37.28	37.59
4	38.38	37.33	37.19	37.22	37.16	36.42	36.06	35.90	---	36.77	37.28	37.59
5	38.41	37.29	37.12	37.15	37.10	36.41	36.08	35.83	---	36.80	37.28	37.60
6	38.40	37.30	37.06	37.14	37.13	36.38	36.05	35.85	36.27	36.84	37.32	37.60
7	38.36	37.35	37.06	37.15	37.15	36.43	36.00	35.90	36.33	36.86	37.36	37.59
8	38.27	37.37	37.17	37.22	37.18	36.46	35.90	35.89	36.34	36.88	37.38	37.60
9	38.20	37.29	37.14	37.25	37.20	36.46	36.03	35.77	36.37	36.90	37.42	37.58
10	38.10	37.32	37.09	37.22	37.13	36.42	36.03	35.83	36.45	36.94	37.44	37.62
11	38.10	37.36	37.18	37.21	37.08	36.34	35.99	35.85	36.49	36.95	37.44	37.64
12	38.09	37.22	37.19	37.16	37.13	36.34	35.93	35.82	36.45	36.97	37.44	37.66
13	38.09	37.27	---	37.26	37.08	36.27	35.90	35.78	36.46	36.96	37.44	37.66
14	38.06	37.24	---	37.16	37.16	36.17	35.90	35.77	36.53	37.00	37.44	37.63
15	38.05	37.17	---	37.18	37.18	36.32	35.84	35.75	36.54	37.04	37.44	37.65
16	38.04	37.16	---	37.20	37.20	36.36	35.83	35.75	36.56	37.05	37.44	37.64
17	38.02	37.22	---	37.16	37.09	36.30	35.78	35.75	36.58	37.07	37.47	37.68
18	38.00	37.22	---	37.14	36.95	36.31	35.76	35.75	36.58	37.09	37.48	37.68
19	38.00	37.22	---	37.15	36.80	36.34	35.83	35.75	36.56	37.05	37.48	37.68
20	37.99	37.21	---	37.17	36.67	36.15	35.82	35.75	36.55	37.07	37.47	37.67
21	37.73	37.22	---	37.20	36.50	36.24	35.78	35.81	36.54	37.11	37.50	37.65
22	37.72	37.22	---	37.17	36.51	36.29	35.77	35.80	36.53	37.16	37.49	37.54
23	37.63	37.21	---	37.20	36.54	36.24	35.77	35.81	36.54	37.19	37.49	37.64
24	37.64	37.21	---	37.20	36.54	36.20	35.77	35.85	36.55	37.19	37.52	37.65
25	37.63	37.18	---	37.20	36.47	36.17	35.74	35.84	36.57	37.22	37.53	37.59
26	37.64	37.18	---	37.18	36.43	36.17	35.71	35.88	36.57	37.22	37.53	37.55
27	37.63	37.18	---	37.22	36.42	36.17	35.74	35.91	36.57	37.22	37.55	37.57
28	37.64	37.16	---	37.18	36.44	36.14	35.74	35.90	36.63	37.23	37.55	37.52
29	37.65	37.09	37.27	37.16	---	36.12	35.80	35.90	36.68	37.24	37.54	37.46
30	37.63	37.10	37.16	37.11	---	36.09	35.84	35.9[illegible]	36.71	37.26	37.54	37.42
31	37.62	---	37.17	37.09	---	36.12	---	---	---	37.26	37.55	---
MAX	38.41	37.59	---	37.26	37.20	36.51	36.17	---	---	37.26	37.55	37.68
MIN	37.62	37.09	---	37.09	36.42	36.09	35.71	---	---	36.72	37.26	37.42

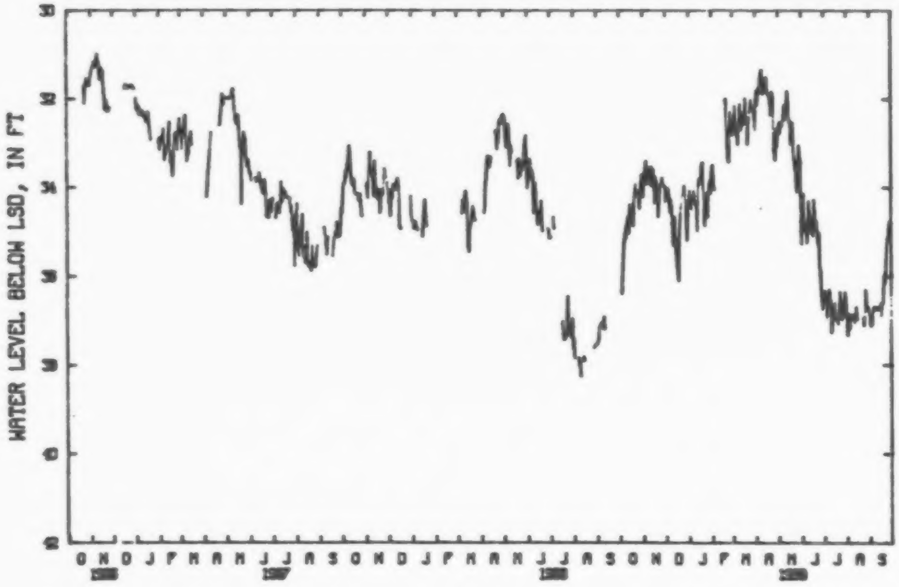


JEFFERSON COUNTY

381527085453001. Local number 86-7 (Belvedere Well), map number 118.
LOCATION.--Lat 38°15'27", long 85°45'30", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at Place Monteplier and Main Street, 3 ft east of east sidewalk. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 89.9 ft, screened 85.1-87.1 ft.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface datum is 452.43 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.0 ft above land-surface datum.
REMARKS.-- Water levels affected by Ohio River stage and pumping from nearby wells.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.99 ft below land-surface datum, Nov. 11 1986; lowest, 39.30 ft below land-surface datum, Aug. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	33.98	34.35	34.34	33.75	32.59	32.71	32.82	34.83	36.67	36.69	36.76
2	---	34.22	34.20	34.06	33.53	32.83	32.05	32.64	35.29	36.50	37.07	37.09
3	---	33.68	34.28	34.10	33.50	32.71	31.81	32.51	34.78	36.33	37.34	37.12
4	36.32	33.64	34.02	34.40	33.95	32.37	32.15	32.78	34.14	36.39	36.83	37.09
5	36.40	33.56	34.06	34.50	34.06	32.14	31.97	32.62	34.64	36.41	36.96	37.07
6	35.86	33.41	34.22	34.31	---	32.50	31.74	32.61	34.80	36.94	37.18	36.69
7	35.52	33.95	34.59	34.33	---	32.82	31.87	32.59	35.02	36.88	36.96	36.67
8	35.26	33.65	34.26	34.07	---	32.73	31.50	32.40	34.97	36.46	36.86	36.77
9	35.04	33.56	34.40	34.20	---	33.04	31.43	32.12	35.25	36.30	36.86	36.72
10	35.15	33.90	34.45	34.42	---	32.60	31.35	32.40	34.96	36.53	36.93	36.68
11	34.85	33.78	35.27	34.35	---	32.22	31.85	32.49	34.29	36.54	36.92	36.70
12	34.77	33.99	35.32	34.65	---	32.12	31.91	32.24	34.64	37.27	37.05	36.76
13	34.66	33.54	35.29	34.99	---	32.54	31.56	32.03	34.67	37.14	36.68	36.71
14	35.05	33.88	34.67	34.08	---	32.71	31.81	31.82	35.02	37.00	36.67	36.71
15	34.61	33.61	35.12	33.80	---	32.37	31.85	32.10	34.98	36.62	36.76	36.68
16	34.39	34.06	35.50	33.81	---	32.30	31.51	32.57	35.06	36.88	36.98	36.59
17	34.85	34.38	35.80	33.92	---	32.60	31.79	32.47	35.11	36.59	---	36.91
18	34.69	33.76	35.91	33.87	---	32.24	31.90	33.06	34.27	36.97	---	36.59
19	34.82	34.17	36.11	33.50	---	31.99	31.93	32.80	34.72	37.01	---	36.60
20	34.87	33.86	35.13	33.44	32.04	32.12	31.93	32.83	34.87	36.97	---	36.51
21	34.37	34.11	34.71	34.04	32.00	32.70	32.39	32.52	34.75	37.08	---	36.10
22	34.20	34.68	34.46	34.83	32.67	33.05	32.20	33.15	35.02	36.81	---	35.96
23	33.92	34.37	34.26	34.88	33.07	32.67	31.82	33.36	35.21	36.35	36.91	36.15
24	34.16	34.13	34.13	34.41	33.43	32.48	31.91	33.59	35.28	36.37	37.09	35.70
25	34.10	33.96	34.05	34.12	33.43	32.28	31.99	33.55	35.03	36.55	37.12	35.39
26	34.09	33.78	33.96	34.44	32.57	32.11	33.20	33.99	35.83	36.99	36.99	35.13
27	34.22	33.80	34.08	34.67	32.28	32.02	33.09	34.11	35.92	36.98	36.30	35.20
28	34.50	33.94	34.30	34.15	32.47	32.18	33.39	33.42	36.39	36.92	36.42	34.87
29	34.12	33.99	34.77	33.90	---	32.22	32.66	33.04	36.58	36.82	36.77	34.75
30	33.88	33.98	35.22	33.84	---	32.40	33.10	33.35	36.76	36.35	36.77	34.94
31	33.71	---	34.85	34.15	---	32.62	---	33.46	---	36.49	36.70	---
MAX	---	34.68	36.11	34.99	---	33.05	33.39	34.11	36.76	37.27	---	37.12
MIN	---	33.41	33.96	33.44	---	31.99	31.35	31.82	34.14	36.30	---	34.75



JEFFERSON COUNTY

381524085452301. Local number 86-8 (Galt House), map number 119.

LOCATION.--Lat 38°15'24", long 85°45'23", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at southwest corner of River Road and Fourth Street, 3 ft west of sidewalk, in Louisville.
Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 77.5 ft, screened 33.5-35.5 ft, 44.5-46.5 ft, 75.5-77.5 ft.

INSTRUMENTATION.--Digital recorder installed June 2, 1989 -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 436.36 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.2 ft above land-surface datum.

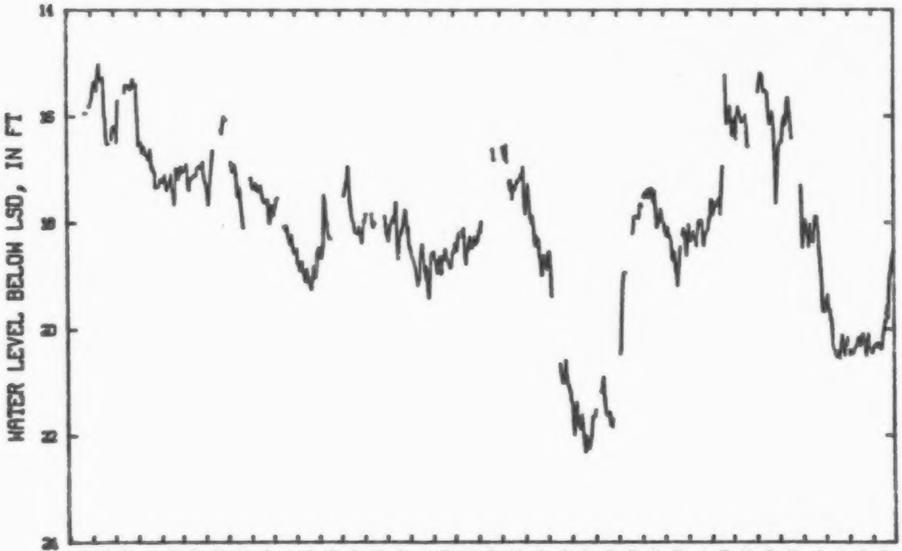
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.02 ft below land-surface datum, Nov. 12, 1986; lowest, 22.31 ft below land-surface datum, Aug. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	17.64	18.02	18.38	17.86	16.08	---	16.71	17.80	19.57	20.25	20.45
2	---	17.70	18.16	18.21	17.55	16.36	---	16.54	18.48	19.56	20.40	20.46
3	---	---	18.15	18.03	17.60	16.37	---	16.49	18.36	19.46	20.50	20.41
4	20.46	17.50	18.25	18.33	17.85	16.16	---	16.50	18.08	19.44	20.46	20.32
5	20.35	17.53	18.08	18.30	17.76	16.06	15.55	16.50	17.94	19.36	20.40	20.34
6	19.84	17.44	18.08	18.35	17.64	16.01	15.39	16.48	17.95	19.68	20.46	20.32
7	19.40	17.45	18.14	18.22	17.63	16.45	15.35	16.23	18.12	19.67	20.48	20.28
8	19.10	17.49	18.27	18.23	17.70	16.04	15.19	16.10	18.17	19.63	20.39	20.34
9	18.96	17.38	18.27	18.16	17.66	15.94	15.27	16.01	18.36	19.84	20.45	20.32
10	18.93	17.46	18.23	18.30	17.64	15.82	15.21	16.00	18.46	19.80	20.36	20.26
11	18.93	17.53	18.45	18.28	17.58	15.97	15.43	16.17	18.19	19.98	20.33	20.29
12	---	17.37	18.65	18.30	17.55	15.91	15.55	16.08	18.03	20.29	20.35	20.36
13	---	17.38	18.71	18.44	17.54	16.10	15.53	15.74	18.20	20.37	20.25	20.38
14	---	17.35	18.54	18.22	17.85	16.13	15.52	15.65	18.33	20.40	20.17	20.39
15	---	17.35	18.57	18.15	17.50	16.12	15.53	15.72	18.31	20.47	20.16	20.35
16	---	17.52	18.72	17.99	17.19	16.03	15.54	15.91	18.38	20.50	20.27	20.12
17	---	17.60	18.91	17.97	16.94	16.07	15.62	15.99	18.30	20.53	20.33	20.05
18	---	17.41	18.97	17.97	---	16.06	15.88	16.24	17.97	20.51	20.33	19.95
19	---	17.39	19.18	17.95	---	15.99	16.00	16.42	17.88	20.42	20.16	19.85
20	---	17.69	18.97	18.00	---	15.97	16.15	---	17.93	20.45	20.10	19.89
21	18.20	17.88	18.80	18.13	15.22	16.28	16.13	---	17.89	20.56	20.09	19.73
22	18.11	18.10	18.53	18.39	15.84	16.58	16.07	---	18.07	20.40	20.20	19.57
23	17.89	18.06	18.45	18.44	16.16	16.56	15.91	---	18.23	20.28	20.30	19.80
24	17.88	17.98	---	18.31	16.14	---	15.99	---	18.57	20.12	20.39	19.37
25	17.88	17.90	---	18.22	16.11	---	16.04	---	18.65	20.19	20.51	19.04
26	17.88	17.74	18.23	18.20	16.00	---	16.55	---	18.86	20.44	20.39	18.93
27	17.88	17.77	18.10	18.16	15.80	---	16.76	---	19.08	20.51	20.22	18.88
28	17.91	17.84	18.13	18.13	15.89	---	17.64	---	19.45	20.48	20.09	18.70
29	17.92	17.97	18.27	18.03	---	---	17.37	---	19.68	20.31	20.27	18.64
30	17.83	17.97	18.48	17.94	---	---	16.99	---	19.69	20.24	20.38	18.60
31	17.64	---	18.62	17.89	---	---	---	17.30	---	20.15	20.41	---
MAX	---	---	---	18.44	---	---	---	---	19.69	20.56	20.51	20.46
MIN	---	---	---	17.89	---	---	---	---	17.80	19.36	20.09	18.60

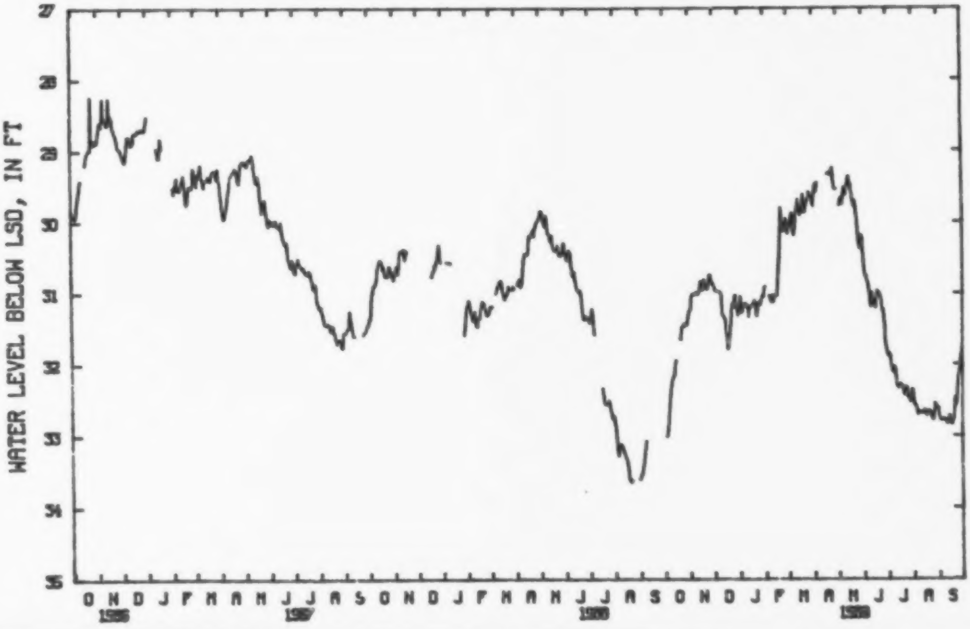


JEFFERSON COUNTY

381528085454201. Local number 86-9 (Ft. Nelson Park), map number 120.
LOCATION.--Lat 38°15'28", long 85°45'42", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at Seventh and Main Streets, at north end of Fort Nelson Park, in Louisville. Owner: City of Louisville.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 88 ft, screened 48-50 ft, 58-60 ft, 86-88 ft.
INSTRUMENTATION.--Digital recorder installed May 15, 1989 -- 60-minute punch.
DATUM.--Elevation of land-surface datum is 450.56 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.10 ft above land-surface datum.
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.
PERIOD OF RECORD.--October 1986 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.26 ft below land-surface datum, Nov. 9, 16, 1986; lowest, 33.65 ft below land-surface datum, Aug. 21, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	31.25	30.90	31.28	30.93	30.17	29.79	---	30.41	31.85	32.36	32.61
2	---	31.25	30.94	31.20	30.91	30.13	29.63	---	30.54	31.89	32.49	32.72
3	---	31.22	30.96	31.05	---	30.06	29.51	29.77	30.68	31.85	32.57	32.78
4	33.00	31.05	30.98	31.28	---	30.01	29.48	29.71	30.78	31.89	32.59	32.79
5	32.99	31.02	30.98	31.27	---	29.93	29.58	29.67	30.76	31.89	32.59	32.79
6	32.90	31.02	---	31.25	---	29.88	29.46	29.69	30.83	32.03	32.67	32.79
7	32.75	31.02	---	31.16	31.04	30.07	---	29.76	30.86	32.09	32.71	32.76
8	32.60	31.02	---	31.15	31.09	30.16	---	29.65	30.91	32.12	32.66	32.77
9	32.44	31.02	30.99	31.16	31.13	30.19	---	29.52	31.00	32.12	32.69	32.78
10	32.31	30.99	31.01	31.16	31.08	30.06	---	29.60	31.14	32.04	32.67	32.79
11	32.22	31.02	31.06	31.21	31.03	29.87	---	29.63	31.20	32.10	32.68	32.82
12	32.19	31.02	31.32	31.20	31.13	29.83	---	29.56	31.05	32.20	32.69	32.84
13	32.16	30.98	31.32	31.34	31.06	29.73	---	29.49	31.00	32.30	32.69	32.79
14	32.15	30.93	31.34	31.19	31.04	29.69	---	29.42	31.13	32.33	32.67	32.72
15	31.99	30.84	31.36	31.21	31.03	29.88	---	29.37	31.18	32.34	32.64	32.72
16	31.95	30.85	31.38	31.20	31.03	29.91	---	29.47	31.21	32.31	32.65	32.75
17	---	30.96	31.53	31.18	30.92	29.80	---	29.48	31.21	32.28	32.71	32.84
18	---	30.95	31.65	31.15	30.71	29.87	---	29.60	31.10	32.31	32.73	32.84
19	---	30.88	31.79	31.13	30.50	29.82	29.33	29.65	30.97	32.32	32.70	32.78
20	---	30.81	31.75	31.10	30.19	29.62	29.32	29.75	31.01	32.33	32.67	32.76
21	31.64	30.92	31.66	31.19	29.80	29.78	29.31	29.79	31.01	32.41	32.65	32.64
22	31.65	30.92	31.49	31.31	29.95	29.87	29.35	29.71	31.05	32.44	32.67	32.46
23	31.51	30.95	31.34	31.33	30.06	29.78	29.35	29.79	31.09	32.43	32.71	32.57
24	31.47	30.94	31.14	31.23	30.14	29.73	29.28	29.89	31.16	32.32	32.75	32.51
25	31.47	30.87	31.21	31.14	30.10	29.70	29.25	30.01	31.25	32.34	32.78	32.29
26	31.43	30.75	31.16	31.12	30.06	29.67	29.39	30.16	31.23	32.45	32.78	32.16
27	31.43	30.75	31.04	31.17	29.96	29.59	29.54	30.32	31.33	32.48	32.72	32.12
28	31.45	30.84	31.04	31.12	30.04	29.62	29.55	30.38	31.48	32.50	32.55	32.00
29	31.45	30.85	31.22	31.05	---	29.63	29.55	30.27	31.67	32.53	32.58	31.87
30	31.43	30.87	31.25	31.05	---	29.65	---	30.19	31.78	32.47	32.63	31.82
31	31.33	---	31.32	31.05	---	29.75	---	30.24	---	32.36	32.64	---
MAX	---	31.25	---	31.34	---	30.19	---	---	31.78	32.53	32.78	32.84
MIN	---	30.75	---	31.05	---	29.59	---	---	30.41	31.85	32.36	31.82



JEFFERSON COUNTY

381518085454401. Local number 86-10 (Mazzoni), map number 121.

LOCATION.--Lat 38°15'18", long 85°45'44", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, southwest side of Congress Alley and 7th Street, 3 ft south of alley, west of entrance to parking garage. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 98 ft, screened 41-43 ft, 61-63 ft, 96-98 ft.

INSTRUMENTATION.--Digital recorder installed Aug. 10, 1989 -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 455.13 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.0 ft above land-surface datum.

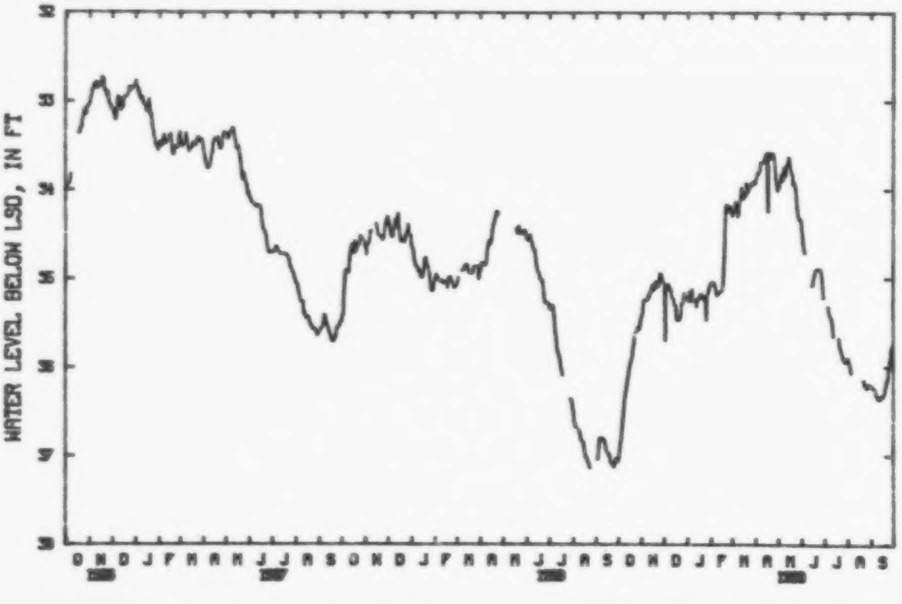
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.73 ft below land-surface datum, Nov. 18, 1986; lowest, 37.14 ft below land-surface datum, Aug. 24, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37.05	35.42	35.06	35.25	35.05	34.29	33.93	33.98	34.43	---	35.90	36.21
2	37.02	35.41	35.08	35.25	35.05	34.28	33.87	33.97	34.51	---	35.93	36.22
3	36.95	35.36	35.70	35.15	35.03	34.23	33.83	33.91	34.59	---	35.96	36.24
4	36.86	35.25	35.13	35.26	35.04	34.22	33.80	33.87	34.68	---	35.99	36.24
5	36.80	35.24	35.08	35.26	35.04	34.16	33.82	33.82	34.71	---	36.03	36.24
6	36.71	35.24	35.06	35.25	35.08	34.13	33.82	33.86	---	35.32	36.07	36.26
7	36.62	35.24	35.06	35.12	35.11	34.19	33.77	33.90	---	35.38	---	36.27
8	36.53	35.24	35.09	35.24	35.16	34.27	33.69	33.83	---	35.42	---	36.32
9	36.43	35.24	35.12	35.24	35.19	34.30	33.69	33.74	---	35.44	---	36.32
10	36.33	35.19	35.12	35.24	35.18	34.25	33.69	33.85	---	35.45	---	36.36
11	36.27	35.22	35.19	35.26	35.15	34.13	33.69	33.83	---	35.48	36.23	36.36
12	36.22	35.16	35.22	35.25	35.15	34.11	33.67	33.77	---	35.52	---	36.37
13	36.19	35.16	35.23	35.32	35.14	34.04	33.65	33.71	---	35.66	---	36.37
14	36.12	35.13	35.23	35.23	35.14	33.97	33.62	33.68	---	---	---	36.34
15	36.07	35.09	35.30	35.22	35.13	34.04	33.59	33.63	35.08	---	---	36.33
16	36.00	35.07	35.30	35.23	35.13	34.10	33.58	33.66	35.07	---	---	36.33
17	35.96	35.13	35.33	35.21	35.08	34.06	34.24	33.74	34.98	---	---	36.35
18	35.92	35.12	35.47	35.17	34.92	34.07	34.24	33.80	34.97	---	---	36.32
19	35.90	35.07	35.43	35.17	34.75	34.06	33.58	33.81	34.91	---	---	36.30
20	35.86	35.03	35.45	35.18	34.36	33.92	33.58	33.86	34.90	35.68	---	36.25
21	35.76	35.10	35.47	35.22	34.17	33.96	33.61	33.94	34.89	35.73	---	36.22
22	35.73	35.09	35.44	35.22	34.16	34.03	33.64	33.91	34.89	35.79	36.16	36.16
23	35.65	35.08	35.39	35.24	34.19	33.98	33.61	33.94	34.89	35.81	36.16	36.16
24	35.62	35.08	35.28	35.22	34.24	33.96	33.58	33.99	34.89	35.85	36.21	36.11
25	35.60	35.04	35.28	35.20	34.23	33.98	33.60	34.08	34.90	35.89	36.23	36.00
26	35.59	34.94	35.28	35.47	34.19	33.93	33.66	34.18	34.90	35.91	36.24	35.97
27	35.55	34.95	35.18	35.19	34.18	33.92	33.77	34.29	34.95	35.93	36.24	35.90
28	35.56	34.98	35.16	35.16	34.21	33.91	33.85	34.33	35.01	35.94	36.24	35.82
29	35.57	35.02	35.23	35.13	---	33.94	33.93	34.33	35.09	35.95	36.20	35.77
30	35.54	35.04	35.23	35.09	---	33.91	34.01	34.33	35.22	35.92	36.20	35.77
31	35.47	---	35.22	35.06	---	33.89	---	34.34	---	35.90	36.21	---
MAX	37.05	35.42	35.70	35.47	35.19	34.30	34.24	34.34	---	---	---	36.37
MIN	35.47	34.94	35.06	35.06	34.16	33.89	33.58	33.63	---	---	---	35.77



JEFFERSON COUNTY

381518085453402. Local number 86-11 (Courthouse Annex), map number 122.

LOCATION.--Lat 38°15'18", long 85°45'34", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at northwest corner behind Courthouse Annex building between 5th and 6th Streets, east of walkway to parking garage. Owner: City of Louisville.

AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 2.5 in, depth 102 ft, screened 42-44 ft, 61-63 ft, 99-101 ft.

INSTRUMENTATION.--Digital recorder installed July 17, 1989 -- 60-minute punch.

DATUM.--Elevation of land-surface datum is 461.63 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 3.0 ft above land-surface datum.

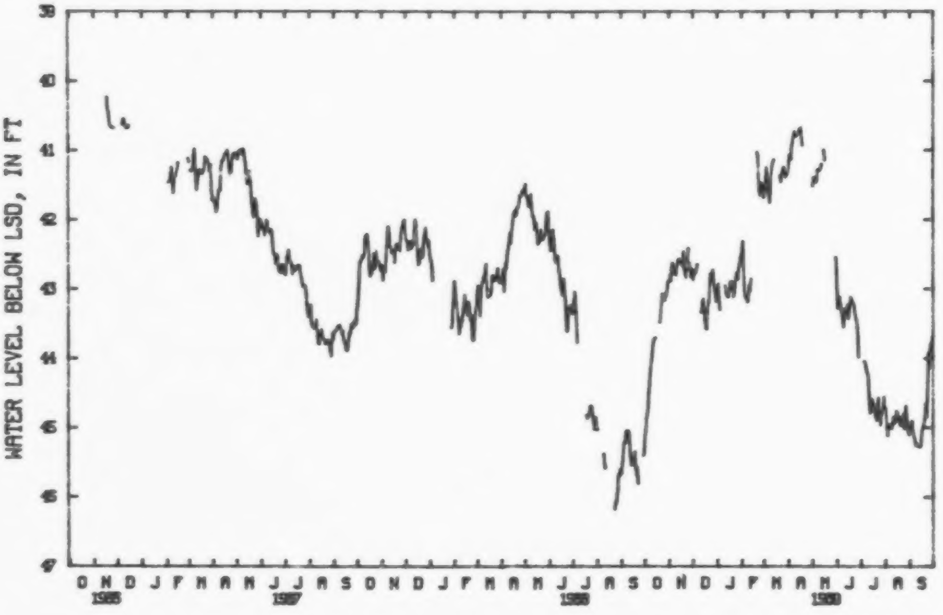
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.

PERIOD OF RECORD.--November 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 40.24 ft below land-surface datum, Nov. 18, 1986; lowest, 46.18 ft below land-surface datum, Aug. 24, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.34	42.88	42.72	43.09	42.51	41.68	41.29	---	42.69	---	44.72	45.11
2	45.16	42.89	42.87	42.96	42.42	41.68	41.20	41.52	43.02	---	44.72	45.01
3	45.05	42.80	42.80	42.92	42.32	41.53	41.07	41.40	43.29	---	44.84	44.95
4	44.87	42.89	42.78	43.19	42.78	41.41	41.10	---	43.26	---	45.00	44.90
5	44.80	42.72	42.77	43.30	43.01	41.25	41.14	41.44	43.12	---	45.12	44.92
6	44.70	42.62	42.71	---	43.11	41.38	40.93	41.47	43.22	44.05	44.98	45.09
7	44.49	42.66	42.65	---	43.14	41.63	40.86	41.41	43.28	44.08	44.95	45.14
8	44.37	42.78	---	---	43.12	41.71	40.80	41.29	43.39	44.13	44.99	45.20
9	44.16	42.79	---	---	43.19	41.76	40.73	41.28	43.45	44.20	44.96	45.26
10	44.05	42.71	---	---	43.09	41.57	40.80	41.30	43.55	44.23	45.02	45.23
11	43.96	42.81	---	---	42.95	41.36	40.77	41.28	43.42	44.28	44.96	45.24
12	43.84	42.65	43.34	42.95	43.03	41.24	40.80	41.25	43.29	44.51	44.85	45.27
13	43.73	42.58	43.31	43.07	42.86	41.17	40.77	41.20	43.39	44.70	44.95	45.27
14	43.73	42.57	43.18	43.11	---	41.14	40.75	---	43.40	44.80	44.93	45.28
15	43.71	42.61	43.14	43.12	---	---	40.72	---	43.23	44.77	44.91	45.28
16	---	42.60	43.32	43.12	---	---	40.68	41.00	43.44	44.58	44.76	45.25
17	---	42.65	43.45	43.02	---	---	40.68	41.15	43.36	44.63	44.78	45.05
18	---	42.67	43.57	42.90	---	---	40.82	---	43.26	44.68	44.87	44.99
19	---	42.58	43.58	42.95	---	---	40.93	---	43.12	44.70	44.90	44.96
20	---	42.46	43.32	42.89	---	41.09	---	---	43.16	44.84	44.95	44.89
21	43.48	42.73	43.18	42.98	41.03	---	---	---	43.20	44.80	44.97	44.80
22	43.36	42.78	43.20	43.12	41.10	41.37	---	---	43.21	44.90	44.85	44.66
23	43.20	42.84	43.01	43.09	41.38	41.46	---	---	43.25	44.66	44.97	44.86
24	43.07	42.71	42.78	42.99	41.61	41.39	---	---	43.33	44.57	44.93	44.54
25	43.10	42.58	42.84	42.83	41.65	41.31	---	---	43.42	44.78	44.80	43.92
26	43.12	42.42	42.91	42.77	41.57	41.25	---	---	43.43	44.88	45.03	44.16
27	43.17	---	42.72	42.84	41.47	41.25	---	---	43.55	44.97	44.81	43.91
28	43.07	42.63	42.86	42.87	41.59	41.36	---	---	43.71	44.83	44.69	43.79
29	43.11	42.83	43.02	42.69	---	41.40	---	---	43.99	44.75	44.82	43.79
30	43.04	42.75	43.09	42.65	---	41.34	---	---	---	44.69	45.01	43.71
31	42.91	---	43.18	42.56	---	41.34	---	42.55	---	44.56	45.08	---
MAX	---	---	---	---	---	---	---	---	---	---	45.12	45.28
MIN	---	---	---	---	---	---	---	---	---	---	44.69	43.71

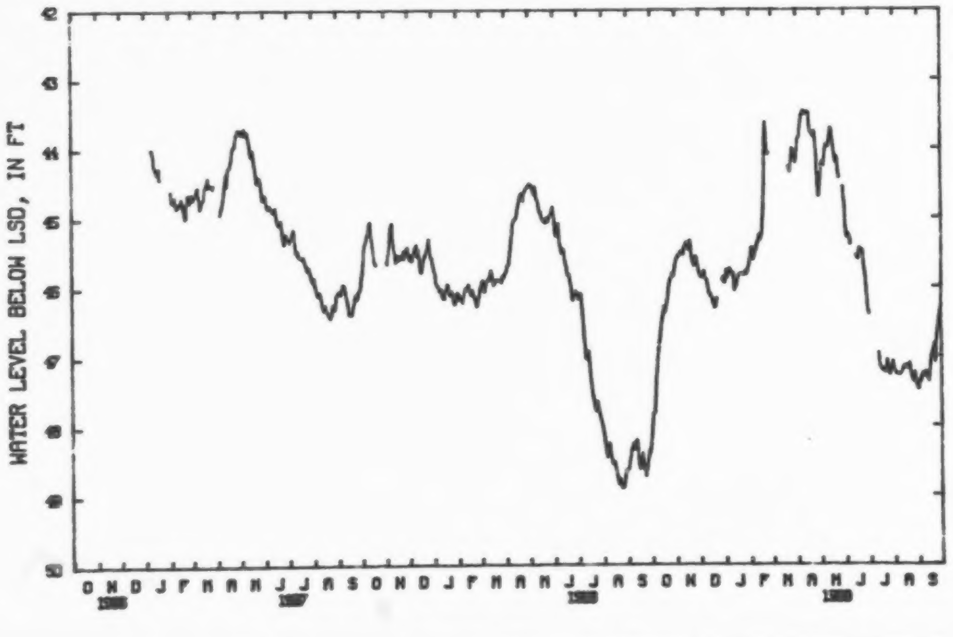


JEFFERSON COUNTY

381518085451801. Local number 87-1 (Levy's), map number 123.
LOCATION.--Lat 38°15'18", long 85°45'18", Hydrologic Unit 05140101, County Code 111, New Albany quadrangle, at 3rd and Market Streets, in west corner of basement in old Levy's building, under east sidewalk on 3rd Street. Owner: Metts Co. Inc.
AQUIFER.--Glacial sand and gravel of Quaternary age. Aquifer code: 112OTSH.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 8 in, depth 99 ft.
INSTRUMENTATION.--Continuous strip-chart recorder.
DATUM.--Elevation of land-surface datum is 464.72 ft above National Geodetic Vertical Datum. Measuring point: Top of casing, 11.5 ft below land-surface datum.
REMARKS.--Water levels affected by Ohio River stage and pumping from nearby wells.
PERIOD OF RECORD.--January 1987 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.46 ft below land-surface datum, Apr. 10, 1989; lowest, 48.89 ft below land-surface datum, Aug. 24, 25, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989
INSTANTANEOUS OBSERVATIONS AT 1200

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48.18	45.59	45.82	45.94	45.60	---	44.17	44.52	44.81	46.40	47.15	47.48
2	47.99	45.60	45.85	45.87	45.57	---	44.03	44.41	45.12	---	47.18	47.47
3	47.82	45.55	45.82	45.75	45.43	---	43.88	44.23	45.25	---	47.22	47.39
4	47.82	45.53	45.86	45.87	45.54	---	43.84	44.19	45.29	---	47.26	47.33
5	47.80	45.56	45.78	45.83	45.61	---	43.85	44.22	45.23	---	47.26	47.30
6	47.58	45.52	45.76	45.80	45.57	---	43.74	44.27	45.26	---	47.25	47.37
7	47.37	45.48	45.78	45.73	45.53	---	43.63	44.16	45.30	---	47.26	47.25
8	47.19	45.51	45.88	45.80	45.43	---	43.53	44.02	45.39	---	47.28	47.28
9	47.04	45.47	45.88	45.78	45.47	---	43.52	43.94	---	---	47.27	47.29
10	46.90	45.47	45.90	45.83	45.39	---	43.46	43.94	---	---	47.28	47.24
11	46.79	45.53	46.00	45.85	45.35	---	43.48	43.95	---	---	47.25	47.22
12	46.72	45.41	46.08	45.80	45.31	---	43.52	43.99	---	---	47.22	47.28
13	46.62	45.41	46.11	46.06	45.25	---	43.50	43.90	---	46.96	47.18	47.33
14	46.51	45.35	46.09	45.97	45.33	---	43.48	43.79	---	47.04	47.15	47.35
15	46.44	45.36	46.14	46.00	45.29	---	43.48	43.71	45.55	47.15	47.14	47.37
16	46.36	45.38	46.15	45.93	45.25	---	43.49	43.75	45.59	47.16	47.14	47.27
17	46.28	45.46	46.21	45.86	45.14	---	43.48	43.86	45.61	47.20	47.18	47.12
18	46.37	45.40	46.24	45.82	44.91	---	43.68	43.97	45.57	47.20	47.19	47.00
19	46.33	45.32	46.30	45.82	44.54	---	43.77	44.07	45.44	47.18	47.16	46.96
20	46.26	45.43	46.29	45.81	43.94	---	43.78	44.17	45.47	47.22	47.12	46.92
21	46.19	45.57	46.25	45.80	43.62	---	43.79	44.21	45.47	47.23	47.10	46.89
22	46.12	45.63	46.16	45.83	43.84	44.27	43.83	44.12	45.47	47.24	47.16	46.82
23	45.99	45.66	---	45.83	44.06	44.32	43.80	44.17	45.49	47.16	47.26	47.10
24	45.91	45.69	---	45.82	44.09	44.35	43.75	44.33	45.64	47.06	47.29	46.92
25	45.87	45.65	---	45.82	44.06	44.29	43.82	44.43	45.75	47.14	47.35	46.74
26	45.86	45.55	---	45.78	---	44.15	43.97	---	45.83	47.21	47.37	46.61
27	45.80	45.59	---	45.76	---	44.00	44.12	---	45.96	47.27	47.30	46.55
28	45.84	45.67	---	45.82	---	44.04	44.50	---	46.10	47.27	47.23	46.45
29	45.84	45.75	45.89	45.79	---	44.12	44.70	---	46.25	47.21	47.28	46.37
30	45.77	45.79	45.85	45.72	---	44.18	44.70	44.56	46.35	47.13	47.39	46.32
31	45.67	---	45.94	45.68	---	44.22	---	44.72	---	47.08	47.44	---
MAX	48.18	45.79	---	46.06	---	---	44.70	---	---	---	47.44	47.48
MIN	45.67	45.32	---	45.68	---	---	43.46	---	---	---	47.10	46.32



LARUE COUNTY

374151085413201. Map number 11.

LOCATION.--Lat 37°41'51", long 85°41'32", Hydrologic Unit 05110001, County Code 123, Nelsonville quadrangle, 150 ft west of blacktop road, 1.6 mi northeast of Roanoke, 2.8 mi south of the junction of State Highway 583 and the Blue Grass Parkway. Owner: George Kennedy.

AQUIFER.--Warsaw Limestone of Late Mississippian age. Aquifer code: 333WRSW.

WELL CHARACTERISTICS.--Drilled unused artesian oil test well, diameter 10 in, depth 605 ft, plugged at 363 ft, cased to 65 ft.

INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.

DATUM.--Altitude of land-surface datum is 905.34 ft, National Geodetic Vertical Datum. Measuring point: Top of casing 1.00 ft above land-surface datum.

REMARKS.--Quality water sample collected and pump test run Apr. 10, 1971. Pumped for 3 hours at 9 gal/min with 4.1 ft of drawdown.

PERIOD OF RECORD.--October 1971 to April 1983 and October 1988 to current year. October 1971 to September 1976 published in hydrograph form and on file at district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 101.81 ft below land-surface datum, Apr. 14, 1980; lowest measured, 107.52 ft below land-surface datum, Dec. 22, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Dec. 13, 1988	105.60	May 3	105.53	Aug. 14	104.21
Jan. 10, 1989	104.93	Jun. 9	103.40	Sept. 18	106.37
Mar. 30	105.29	Jul. 5	106.11		

LAUREL COUNTY

370757084045001. Map number 12.

LOCATION.--Lat 37°07'57", long 84°04'50", Hydrologic Unit 05130101, County Code 125, London quadrangle, in back yard at 116 Boering Drive, 0.1 mi northeast of Marymount Hospital, in London. Owner: J.R. Hale.

AQUIFER.--Lee Formation of Early Pennsylvanian age. Aquifer Code: 327LEE.

WELL CHARACTERISTICS.--Drilled unused artesian and water-table well in sandstone, diameter 12 in, depth 370 ft, length of casing unknown, open hole below casing.

INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.

DATUM.--Altitude of land-surface datum (from topographic map) is about 1,190 ft, National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 4.13 ft above land-surface datum.

REMARKS.--Lowest water level is a pumping level. Water-quality sample collected and pump test ran Oct. 14, 1965. Pumped 1.2 hours at 11 gal/min with 47.30 ft of drawdown.

PERIOD OF RECORD.--October 1947, May 1951 to September 1962, June 1965 to September 1984 and October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.68 ft below land-surface datum, Aug. 17, 1989, lowest measured, 225.00 ft below land-surface datum, Oct. 25, 1947.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 17, 1988	43.51	Apr. 11	41.31	Jul. 13	40.96
Mar. 2, 1989	41.48	May 15	40.99	Aug. 17	40.68

LETCHER COUNTY

371033082374301. Map number 13.

LOCATION.--Lat 37°10'33", long 82°37'43", Hydrologic Unit 05100201, County Code 133, Jenkins West quadrangle, in a concrete well house, 30 ft south of railroad tracks, 20 ft north of a gravel street, 0.5 mi northeast of the junction of U.S. Highways 23 & 119, in Jenkins. Owner: Chesapeake & Ohio Railroad Company.

AQUIFER.--Sandstone and shale of Breathitt Formation of Early and Middle Pennsylvanian age. Aquifer code: 324BRRT.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in, depth 146 ft, length of casing unknown, open hole below casing.

INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.

DATUM.--Altitude of land-surface datum (from topographic map) is about 1,512 ft, National Geodetic Vertical Datum. Measuring point: Bottom edge of slot in casing, 4.00 ft below land-surface datum.

REMARKS.--Well test pump, Oct. 9, 1962. Pumped 1 hour at 15 gal/min with 9.74 ft of drawdown.

PERIOD OF RECORD.--April 1962 to September 1984 and October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.05 ft below land-surface datum, May 7, 1984; lowest measured, 24.07 ft below land-surface datum, Nov. 20, 1963.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 16, 1988	22.64	Apr. 11	21.18	Aug. 17	22.75
Jan. 20, 1989	21.39	May 16	21.00		
Mar. 1	21.18	Jun. 28	21.40		

LINCOLN COUNTY

372739084402101. Map number 14.
LOCATION.--Lat 37°27'39", long 84°40'21", Hydrologic Unit 05110001, County Code 137, Halls Gap quadrangle, in a pasture, 100 ft north of gravel road, 0.8 mi northeast of Green River Church, 2.1 mi southwest of Halls Gap. Owner: Omer Lewis.
AQUIFER.--Sandstone and shale of Borden Formation of Early Mississippian age. Aquifer code: 338BRDN.
WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 33 ft, cased to 10 ft, open hole 10 to 33 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is 1,060 ft, National Geodetic Vertical Datum. Measuring point: Floor of recorder shelter, 2.25 above land-surface datum.
REMARKS.--Water levels affected by atmospheric pressure.
PERIOD OF RECORD.--April 1953 to September 1984 and October 1988 to current year. Well test pump, Oct. 14, 1965. Estimated yield base on recovery, 0.1 gal/min.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.30 ft below land-surface datum, Nov. 5, 1981; lowest measured, 10.69 ft below land-surface datum, July 24, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 30, 1988	10.48	Mar. 20	5.08	Jul. 24	10.69
Jan. 10, 1989	7.30	Apr. 24	9.60	Aug. 29	10.36
Feb. 13	7.89	Jun. 7	10.36		

LOGAN COUNTY

365046086444901. Map number 15.
LOCATION.--Lat 36°50'46", long 86°44'49", Hydrologic Unit 05130206, County Code 141, Auburn quadrangle, at the southeast corner of an abandoned farmhouse, 90 ft east of Kentucky Highway 980, 0.6 mi south of U.S. Highway 68, 2.4 mi southwest of Auburn. Owner: W.D. Appling.
AQUIFER.--Girkin Formation of Late Mississippian age. Aquifer code: 332GRKN.
WELL CHARACTERISTICS.--Drilled unused water-table well, diamoter 6 in, depth 70 ft, length of casing unknown.
INSTRUMENTATAION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is 685 ft. Measuring point: Top of casing 0.70 ft above land-surface datum.
REMARKS.--8 in surface casing, lined with 6 in casing.
PERIOD OF RECORD.--May to November 1982 and October 1988 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.20 ft below land-surface datum, Feb. 9, 1989; lowest measured, 42.78 ft below land-surface datum, Sept. 19, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 16, 1988	37.01	Apr. 25	36.00	Aug. 7	38.52
Dec. 20	38.50	May 18	37.75	Sept. 19	42.78
Feb. 9, 1989	30.20	Jun. 28	35.43		

MCCRACKEN COUNTY

370551088510401. Map number 16.
LOCATION.--Lat 37°05'51", long 88°51'04", Hydrologic Unit 05140206, County Code 145, Heath quadrangle, 35 ft south of a gravel road in field of brush, at former Kentucky Ordnance Works, (now managed by Kentucky Department of Fish & Wildlife Resources), 3.4 mi northwest of Heath. Owner: State of Kentucky.
AQUIFER.--Sand of McNairy Formation of Late Cretaceous age. Aquifer code: 211MCNR.
WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 in, depth 192 ft, cased to 192 ft.
INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.
DATUM.--Altitude of land-surface datum (from topographic map) is about 435 ft. Measuring point: Floor of recorder shelter, 4.76 ft above land-surface datum.
PERIOD OF RECORD.--October 1969 to September 1983 and October 1988 to current year. August 1969 to September 1976 published in hydrograph form and on file at Paducah subdistrict office.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 107.07 ft below land-surface datum, July 30, 1970; lowest measured, 111.50 ft below land-surface datum, Jan. 25, 1972 and Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 9, 1988	111.50	Apr. 28	110.32	Jun. 29	109.96
Dec. 22	108.96	May 19	110.21	Sept. 18	109.02
Mar. 31, 1989	110.84				

METCALFE COUNTY

370211085364301. Map number 17.

LOCATION.--Lat 37°02'11", long 85°36'43", Hydrologic Unit 05110001, County Code 169, East Fork quadrangle, at an old homesite 150 ft south of a blacktop road, 0.5 mi southwest of Metcalfe County Lake, 0.9 mi northwest of junction of U.S. Highway 68 and State Highway 544, 6 mi southeast of Sulphur well. Owner: Larry Froedge, (previously published as Alec Russell).

AQUIFER.--Salem and Warsaw Limestones of Late Mississippian age. Aquifer code: 333SMWR

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 6 in, depth 106 ft, length of casing unknown.

INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.

DATUM.--Altitude of land-surface datum (from topographic map) is about 885 ft. Measuring point: Top of casing, 0.56 ft above land-surface datum.

PERIOD OF RECORD.--October 1979 to April 1983 and October 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.52 ft below land-surface datum, Feb. 23, 1989; lowest measured, 77.88 ft below land-surface datum, Jan. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 9, 1988	77.10	Feb. 23	73.52	Jun. 12	75.43
Dec. 14	76.80	Mar. 30	73.92	Aug. 4	75.50
Jan. 11, 1989	75.34	May 4	74.86	Sept. 6	75.95

WARREN COUNTY

370342086080101. Map number 18.

LOCATION.--Lat 37°03'42", long 86°08'01", Hydrologic Unit 05110002, County Code 227, Smiths grove quadrangle, in a pasture 50 ft southwest of a stone farm house, 200 ft south of State Highway 65, 0.6 mi southeast of Rocky Hill. Owner: Earl Estes.

AQUIFER.--St. Louis Limestone of Late Mississippian age. Aquifer code: 333STLS.

WELL CHARACTERISTICS.--Drilled unused artesian and water-table well, diameter 6 in, depth 95 ft, length of casing unknown.

INSTRUMENTATION.--Six-week interval measurement with chalked tape by USGS personnel.

DATUM.--Altitude of land-surface datum (from topographic map) is about 645 ft. Measuring point: Floor of recorder shelter, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--November 1961 to January 1983 and October 1988 to current year. November 1961 to September 1976 published in hydrograph form and on file at district office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.19 ft below land-surface datum, Mar. 15, 1975; lowest measured, 76.95 ft below land-surface datum, Dec. 31, 1962.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

Date	Water Level	Date	Water Level	Date	Water Level
Nov. 9, 1988	70.70	Apr. 24	69.53	Jul. 12	69.70
Mar. 6, 1989	64.60	May 25	69.70	Aug. 23	70.16

CHEMICAL QUALITY OF PRECIPITATION

ROWAN COUNTY

380706083324900 - CLARK STATE FISH HATCHERY, NEAR MOREHEAD, KY

(National Atmospheric Deposition Program network station)

LOCATION.--Lat 38 06'58", Long 83 33'18", Rowan County, Hydrologic Unit 05100101 at Clark State Fish Hatchery, 0.9 mi southwest of Clark State Fish Hatchery office, 1.2 mi west of Cave Run Reservoir Dam.
PERIOD OF RECORD.--September 1983 to current year.
INSTRUMENTATION.--Wet/dry precipitation collector, weighing bucket type recording rain gage.
REMARKS.--Samples collected on weekly basis by observer.
COOPERATION.--Chemical quality data were provided by the National Atmospheric Deposition Program.

CHEMICAL ANALYSES, OCTOBER 1988 TO SEPTEMBER 1989

DATE	TOTAL PRECIPITATION FOR DEFINED PERIOD (IN)	VOLUME ATM DEP WET (L)	PH FIELD ATM DEP WET T (UNITS)	SPEC. CONDUCTANCE FIELD ATM DEP WET TOT (US/CM)	CALCIUM ATM DEP WET DIS (MG/L)	MAGNESIUM ATM DEP WET DIS (MG/L)	SODIUM ATM DEP WET DIS (MG/L)
OCT 04-11	--	0.006	--	--	--	--	--
OCT 11-18	0.20	0.399	4.37	24.8	0.320	0.059	0.185
OCT 18-25	1.35	2.356	4.60	13.3	0.670	0.383	0.038
OCT 25- NOV 01	0.05	0.003	--	--	--	--	--
NOV 01-08	1.21	1.774	4.58	11.1	0.070	0.009	0.039
NOV 08-15	0.82	1.718	4.49	13.3	0.060	0.010	0.044
NOV 15-22	4.91	0.009	4.84	6.1	0.040	0.009	0.023
NOV 22-29	0.30	0.007	--	--	--	--	--
NOV 29- DEC 06	0.02	0.002	--	--	--	--	--
DEC 06-13	0.03	0.004	--	--	--	--	--
DEC 13-20	--	0.002	--	--	--	--	--
DEC 20-27	3.27	0.200	4.84	8.0	0.180	0.020	0.029
DEC 27 1988- JAN 03 1989	0.76	1.481	4.37	14.4	0.050	0.013	0.082
JAN 03-10	1.34	2.549	4.53	11.4	0.170	0.021	0.075
JAN 10-17	1.29	2.251	4.54	12.0	0.040	0.014	0.094
JAN 17-24	--	0.005	--	--	--	--	--
JAN 24-31	0.26	0.621	4.15	23.1	0.150	0.016	0.088
JAN 31- FEB 07	1.24	2.338	4.53	15.8	0.029	0.004	0.034
FEB 07-14	2.66	4.987	4.44	16.2	0.039	0.006	0.031
FEB 14-21	5.15	9.047	4.45	13.4	0.052	0.011	0.045
FEB 21-28	0.12	0.323	4.03	50.1	0.243	0.038	0.169
FEB 28- MAR 07	2.69	4.900	4.52	14.5	0.062	0.004	0.053
MAR 07-14	0.15	0.502	4.36	17.9	0.192	0.021	0.050
MAR 14-21	1.55	3.000	4.24	26.1	0.189	0.035	0.143
MAR 21-28	--	0.001	--	--	--	--	--
MAR 28- APR 04	1.25	0.003	4.22	25.8	0.150	0.025	0.086
APR 04-11	--	1.459	4.32	26.8	0.190	0.024	0.035
APR 11-18	0.21	0.662	4.38	23.0	0.200	0.030	0.057
APR 18-25	0.16	0.471	4.03	58.6	0.540	0.060	0.091

CHEMICAL QUALITY OF PRECIPITATION

ROWAN COUNTY

380706083324900 - CLARK STATE FISH HATCHERY, NEAR MOREHEAD, KY--Continued

(National Atmospheric Deposition Program network station)

CHEMICAL ANALYSES, OCTOBER 1988 TO SEPTEMBER 1989

DATE	TOTAL PRECIP-ITATION FOR DEFINED PERIOD (IN)	VOLUME ATM DEP WET (L)	PH FIELD ATM DEP WET T (UNITS)	SPEC. CONDUC-TANCE FIELD ATM DEP WET TOT (US/CM)	CALCIUM ATM DEP WET DIS (MG/L)	MAG-NESIUM ATM DEP WET DIS (MG/L)	SODIUM ATM DEP WET DIS (MG/L)
APR 25-MAY 02	0.99	2.000	6.74	34.8	0.440	0.126	0.123
MAY 02-09	1.99	3.668	5.36	21.9	0.550	0.289	0.086
MAY 09-16	--	0.663	4.15	42.1	0.770	0.089	0.065
MAY 16-23	0.79	1.556	4.42	22.4	0.498	0.058	0.083
MAY 23-30	0.88	1.738	4.28	26.0	0.402	0.061	0.120
MAY 30-JUN 06	0.75	1.389	4.49	19.7	0.343	0.036	0.057
JUN 06-13	1.66	3.062	4.45	16.2	0.079	0.011	0.045
JUN 13-20	0.93	1.841	6.68	28.5	0.559	0.215	0.242
JUN 20-27	0.76	1.321	6.43	19.6	1.07	0.164	0.129
JUN 27-JUL 04	0.44	0.716	4.22	39.3	1.05	0.068	0.050
JUL 04-11	0.14	0.286	4.93	10.9	0.662	0.054	0.067
JUL 11-18	0.86	1.546	4.31	22.1	0.080	0.012	0.025
JUL 18-25	2.85	5.045	4.21	26.9	0.092	0.015	0.024
JUL 25-AUG 01	--	2.237	3.86	56.7	0.229	0.028	0.041
AUG 01-08	--	0.458	4.29	25.7	0.331	0.050	0.150
AUG 08-15	--	0.002	--	--	--	--	--
AUG 15-22	0.83	1.452	3.95	64.7	0.260	0.028	0.044
AUG 22-29	0.38	0.646	4.05	24.8	0.072	0.013	0.049
AUG 29-SEP 05	0.10	0.180	4.05	47.1	0.190	0.038	0.048
SEP 05-12	0.27	0.469	4.24	24.3	0.272	0.022	0.039
SEP 12-19	1.89	3.522	4.25	21.0	0.055	0.009	0.022
SEP 19-26	2.24	3.620	4.49	22.4	0.031	0.007	0.049

CHEMICAL QUALITY OF PRECIPITATION

ROWAN COUNTY

380706083324900 - CLARK STATE FISH HATCHERY, NEAR MOREHEAD, KY--Continued

(National Atmospheric Deposition Program network station)

CHEMICAL ANALYSES, OCTOBER 1988 TO SEPTEMBER 1989

DATE	POTASSIUM ATM DEP WET DIS (MG/L)	SULFATE ATM DEP WET DIS AS SO4 (MG/L)	CHLORIDE ATM DEP WET DIS (MG/L)	NITROGEN NITRATE ATM DEP WET DIS AS NO3 (MG/L)	NITROGEN AMMON. ATM DEP WET DIS AS NH4 (MG/L)	PHOSPHOROUS ORTHO ATM DEP WET DIS AS PO4 (MG/L)
OCT 04-11	--	--	--	--	--	--
OCT 11-18	0.073	3.09	0.27	1.97	0.420	<0.020
OCT 18-25	0.453	1.84	0.17	<0.03	<0.020	<0.020
OCT 25-NOV 01	--	--	--	--	--	--
NOV 01-08	0.012	1.19	0.08	0.98	0.180	<0.020
NOV 08-15	0.013	1.25	0.08	0.82	0.040	<0.020
NOV 15-22	0.035	0.53	0.05	<0.03	<0.020	<0.020
NOV 22-29	--	--	--	--	--	--
NOV 29-DEC 06	--	--	--	--	--	--
DEC 06-13	--	--	--	--	--	--
DEC 13-20	--	--	--	--	--	--
DEC 20-27	0.009	0.83	0.07	0.57	<0.020	<0.020
DEC 27 1988-JAN 03 1989	0.003	1.91	0.16	0.73	0.060	<0.020
JAN 03-10	0.018	1.43	0.12	0.77	0.110	<0.020
JAN 10-17	0.192	1.09	0.25	0.60	0.210	0.200
JAN 17-24	--	--	--	--	--	--
JAN 24-31	0.020	2.74	0.13	1.77	0.170	<0.020
JAN 31-FEB 07	<0.003	1.50	0.06	0.67	0.040	<0.020
FEB 07-14	0.003	1.27	0.27	0.72	0.060	<0.020
FEB 14-21	0.004	1.30	0.08	0.51	0.040	<0.020
FEB 21-28	0.030	3.80	0.28	5.22	0.660	0.030
FEB 28-MAR 07	<0.003	1.54	0.10	0.32	<0.020	<0.020
MAR 07-14	0.048	2.24	0.06	0.80	0.190	<0.020
MAR 14-21	0.118	3.33	0.22	1.72	0.470	0.030
MAR 21-28	--	--	--	--	--	--
MAR 28-APR 04	0.050	2.46	0.16	1.68	0.190	<0.020
APR 04-11	0.062	2.34	0.08	2.09	0.590	<0.020
APR 11-18	0.138	2.74	0.07	1.48	0.860	<0.020
APR 18-25	0.070	7.00	0.20	4.33	1.34	<0.020
APR 25-MAY 02	0.815	4.84	0.27	2.58	5.25	1.33
MAY 02-09	1.18	3.54	0.26	0.81	6.75	2.52
MAY 09-16	0.180	5.26	0.14	3.59	1.38	0.100
MAY 16-23	0.087	2.88	0.18	1.86	0.610	0.030

CHEMICAL QUALITY OF PRECIPITATION

ROWAN COUNTY

380706083324900 - CLARK STATE FISH HATCHERY, NEAR MOREHEAD, KY--Continued

(National Atmospheric Deposition Program network station)

CHEMICAL ANALYSES, OCTOBER 1988 TO SEPTEMBER 1989

DATE	POTASSIUM ATM DEP WET DIS (MG/L)	SULFATE ATM DEP WET DIS AS SO4 (MG/L)	CHLORIDE ATM DEP WET DIS (MG/L)	NITROGEN NITRATE ATM DEP WET DIS AS NO3 (MG/L)	NITROGEN AMMON. ATM DEP WET DIS AS NH4 (MG/L)	PHOSPHOROUS ORTHO ATM DEP WET DIS AS PO4 (MG/L)
MAY 23-30	0.085	3.05	0.21	2.26	0.460	<0.020
MAY 30-JUN 06	0.052	2.32	0.13	1.42	0.410	<0.020
JUN 06-13	0.015	1.57	0.12	1.05	0.230	<0.020
JUN 13-20	0.576	2.80	0.32	1.12	5.30	1.14
JUN 20-27	0.326	2.55	0.24	1.45	2.80	0.850
JUN 27-JUL 04	0.175	6.41	0.19	2.79	1.56	0.110
JUL 04-11	0.057	1.55	0.14	1.15	0.300	0.020
JUL 11-18	0.012	2.05	0.07	1.45	0.150	<0.020
JUL 18-25	0.034	3.53	0.08	1.53	0.430	<0.020
JUL 25-AUG 01	0.023	7.21	0.10	2.66	0.450	<0.020
AUG 01-08	0.050	2.94	0.21	1.97	0.460	<0.020
AUG 08-15	--	--	--	--	--	--
AUG 15-22	0.019	6.13	0.22	3.15	0.380	<0.020
AUG 22-29	0.016	4.11	0.14	2.87	0.250	<0.020
AUG 29-SEP 05	0.056	5.94	0.15	2.56	0.550	<0.020
SEP 05-12	0.021	3.22	0.17	1.74	0.240	0.030
SEP 12-19	0.006	2.51	0.07	0.84	0.130	<0.020
SEP 19-26	0.011	2.15	0.11	1.06	0.210	<0.020

DISCONTINUED GAGING-STATION RECORDS

STATION NUMBER	STATION NAME AND LOCATION	DRAINAGE AREA	LATI-TUDE	LONGI-TUDE	SW BEGIN YEAR	SW END YEAR	PEAK STAGE	COM-PLETE STAGE	PEAK FLOW	LOW FLOW	MISC FLOW MEAS
03207845	CARD CR AT MOUTHCARD, KY	4.18	372254	0821530	1973	1974		E			
03207875	FEDS CR AT FEDS CR, KY	11.60	372407	0821438	1973	1974		E			
03207905	BIG CR AT DUNLAP, KY	9.55	372543	0821452	1974	1976		E			
03207915	ELKFOOT BRANCH NR NIGH, KY	0.70	372352	0821703	1980	1984		E			
03207925	ISLAND CR NR PHYLLIS, KY	2.42	372523	0821817	1974	1974		E			
03207935	LICK CR AT LICK CR, KY	6.70	372344	0821808	1973	1976		E			
03207940	MILLERS CR NR PHYLLIS, KY	1.68	372519	0821953	1973	1975		E			
03207962	DICKS FK AT PHYLLIS, KY	0.82	372657	0822016	1975	1984		E			
03209400	ELKHORN CR NR ELKHORN CITY, KY	48.80	371630	0822245	1967	1972			E	E	
03209440	SHELBY CR AT DORTON, KY	12.60	371638	0823444	1971	1976*	E	E	E	E	
03209460	SHELBY CR AT SHELBIANA, KY	112.00	372524	0822957	1965	1965				E	
					1972	1981					
03209545	MUD CR AT HAROLD, KY	51.90	373213	0823840	1975	1981				E	
03209575	BILL D BR NR KITE, KY	3.17	371839	0824858	1976	1986	E		E		
03209600	RIGHT FK BEAVER CR AT WAYLAND, KY	73.90	372635	0824828	1959	1975				E	
03209700	BEAVER CR AT MARTIN, KY	228.00	373410	0824528	1953	1972				E	
03209800	LEVISA FK AT PRESTONSBURG, KY	1702.00	374015	0824638	1964	1981		E			
03209890	MIDDLE CR NR PRESTONSBURG, KY	62.10	373917	0824749	1975	1981				E	
03210040	RACCOON CR NR ZEBULON, KY	14.80	373055	0822705	1975	1976		E			
03210160	CANEY FK NR GULNARE, KY	3.74	373511	0823223	1975	1976*		E	E		
03210310	BRUSHY FK AT HEENON, KY	20.40	373958	0822903	1974	1976		E			
03210420	BUFFALO CR NR ENDICOTT, KY	6.21	373758	0823618	1974	1974		E			
03210500	JOHNS CR NR PRESTONSBURG KY	197.00	374155	0824330	1938	1940		E			
03211945	OPEN FK PAINT CR NR RELIEF, KY	25.50	375531	0825944	1975	1981				E	
03213577	KERSHAW BR NR HURLEY, VA	.60	372701	0820040	1981	1982		E			
03213594	CAMP CR NR ARGO, KY	1.60	372829	0820516	1981	1982		E			
03213600	KNOX CR AT ARGO, KY	95.90	372901	0820306	1958	1972				E	
03213630	R FK HURRICANE CR NR STOPOVER, KY	0.82	372946	0820522	1980	1983		E			
03213790	BIG CR NR HATFIELD, KY	59.10	374421	0822025	1975	1981				E	
03214400	WOLF CR AT PILGRIM, KY	62.80	374749	0822544	1975	1981				E	
03214730	ROCKCASTLE CR AT CLIFFORD, KY	121.00	380007	0823112	1965	1965					E
					1972	1981					
03214980	BIG SANDY R AUXILIARY AT LOUISA, KY	3885.00	380713	0823638	1938	1976		E			
03215000	BIG SANDY R AT LOUISA, KY	3897.00	381016	0823805	1939	1977		E			C
03215362	BLAINE CR ABOVE CAINS CR NR BLAINE, KY	64.70	380123	0825207	1975	1981				E	
03215410	BLAINE CR NR BLAINE, KY	119.00	380400	0824938	1972	1976				E	
03215500	BLAINE CR AT YATESVILLE, KY	217.00	380840	0824105	1915	1975*	E	E	E	E	
03216000	OHIO R AT ASHLAND, KY	60750.00	382852	0823812	1939	1975		E			
03216190	LITTLE SANDY R AT SANDY HOOK, KY	35.70	380650	0830702	1970	1974				E	
03216200	LITTLE SANDY R NR SANDY HOOK KY	60.40	380708	0830619	1954	1969				E	
03216400	LITTLE SANDY R AT LEON, KY	255.00	381711	0825839	1962	1980		C			
03216438	LITTLE FK LITTLE SANDY R NR WILLARD, KY	58.10	381208	0825531	1975	1981				E	
03216480	LITTLE FK LITTLE SANDY R NR GRAYSON, KY	132.00	381815	0825623	1965	1965					E
					1972	1981					
03216505	BECKWITH BR TRIBUTARY NR GRAYSON, KY	.51	382120	0825418	1977	1986	E		E		
03216550	E FK LITTLE SANDY R NR CANNNONSBURG, KY	38.20	381922	0824308	1980	1981		E		E	
03216564	MILE BR NR COALTON, KY	1.61	382156	0824650	1977	1986	E		E		
03216570	E FK LITTLE SANDY R NR ARGILLITE, KY	138.00	382844	0824546	1968	1976				E	
03216901	TROUGH CAMP CR TRIB NR OLIVE HILL, KY	1.11	382009	0831211	1976	1986	E		E		
03216935	TYGARTS CR NR KEHOE, KY	124.00	382606	0830204	1963	1974		E			E
03216965	BUFFALO CR BELOW GRASSY CR AT KEHOE, KY	54.60	382722	0830347	1975	1981				E	
03237225	KINNICONICK CR NR KINNICONICK, KY	60.10	382917	0832213	1975	1981				E	
03237230	KINNICONICK CR NR RUGLESS, KY	109.00	382901	0831655	1954	1972				E	
03237246	LAUREL FK NR CAMP DIX, KY	57.00	382808	0831542	1975	1981				E	
03237285	SALT LICK CR NR VANCEBURG, KY	47.50	383526	0832056	1954	1962					
03237895	INDIAN RUN TRIB NR TOLLESBORO, KY	.23	383452	0833001	1975	1986					
03237985	CABIN CR NR PLUMVILLE, KY	57.60	383632	0833750	1975	1978				E	
					1980	1981					
03238000	OHIO R AT MAYSVILLE, KY	70130.00	383855	0834549	1939	1980		E	E		
03238030	LAWRENCE CR NR MAYSVILLE, KY	1.90	383804	0834732	1975	1986	E		E		
03238620	BRACKEN CR NR AUGUSTA, KY	28.80	384505	0835805	1975	1978				E	
					1980	1981					
03238660	LOCUST CR NR AUGUSTA, KY	41.70	384449	0840612	1975	1978				E	
					1980	1981					
03238750	TWELVEMILE CR NR CALIFORNIA, KY	44.30	385738	0841926	1975	1981				E	
03238795	DUCK CR AT COLD SPRING, KY	.49	390158	0842543	1975	1978			E		
03248170	LICKING R AT FREDVILLE, KY	40.30	373613	0825817	1973	1976				E	
03248250	LICKING R AT ROYALTON, KY	76.70	374021	0830122	1973	1976				E	
03248685	ELK FK NR LENOX, KY	59.40	375652	0831257	1958	1973				E	
03248730	CANEY CR NR W LIBERTY, KY	41.40	375600	0831836	1973	1975				E	
03248765	GRASSY CR NR W LIBERTY, KY	46.10	375413	0832111	1974	1979				E	
						1981					
03248815	BLACKWATER CR NR EZEL, KY	38.30	375530	0832459	1974	1981					
03248855	N FK LICKING R NR WRIGLEY, KY	33.70	380239	0831813	1974	1981				E	
03249000	LICKING R AT YALE, KY	714.00	380255	0832930	1937	1942		E			
03250080	JACKS BRANCH NR MOREHEAD, KY	.19	381312	0832703	1976	1986	E		E		
03250185	SLATE CR NR JEFFERSNVILLE, KY	56.70	375950	0835016	1973	1981				E	
03250240	SLATE CR NR OWINGSVILLE, KY	185.00	380829	0834343	1954	1972				E	
03250243	ROSE RUN TRIB NR OLYMPIA, KY	.70	380646	0834230	1975	1986	E		E		
03250320	ROCK LICK CR NR SHARKEY, KY	4.01	381506	0833504	1973	1982		E			
03250330	FOX CR NR HILLSBORO, KY	110.00	381517	0833911	1953	1972			E	E	
03250470	FLEMING CR NR HILL TOP, KY	77.20	382244	0834942	1954	1972				E	
03250500	LICKING R AT BLUE LICK SPRINGS, KY	1785.00	382519	0835957	1938	1959*	E	E	E		
03250620	JOHNSON CR TRIB NR FAIRVIEW, KY	.33	382846	0835907	1976	1986	E		E		
03250640	JOHNSON CR AT PIQUA, KY	72.40	382822	0840256	1973	1974				E	

DISCONTINUED GAGING-STATION RECORDS

STATION NUMBER	STATION NAME AND LOCATION	DRAINAGE AREA	LATI-TUDE	LONGI-TUDE	SW BEGIN YEAR	SW END YEAR	PEAK STAGE	COM-PLETE STAGE	PEAK FLOW	LOW FLOW	MISC FLOW MEAS
03251008	WELLS CR TRIB NR WASHINGTON, KY	.98	383526	0834924	1977	1986	E		E		
03251400	N FK LICKING R NR MILFORD, KY	286.00	383500	0840920	1954	1972			E	E	
03251015	LEES CREEK TRIB AT MAYS LICK, KY	.45	383128	0835004	1975	1986	E		E		
03251665	STONER CR NR N MIDDLETOWN, KY	51.80	380651	0840817	1974	1981				E	
03251790	STRODES CR NR N MIDDLETOWN, KY	53.60	380635	0841041	1973	1981				E	
03252188	GRASSY LICK CR NR SHARPSBURG, KY	40.60	380857	0835901	1973	1974				E	
03252190	HINKSTON CR NR SHARPSBURG, KY	78.90	381003	0835832	1973	1977				E	
03252300	HINKSTON CR NR CARLISLE, KY	154.00	381433	0840309	1968	1976				E	
03252770	RAVEN CR NR BERRY, KY	46.60	383050	0842417	1973	1981				E	
03252940	FK LICK CR AT MORGAN, KY	50.20	383627	0842431	1973	1981				E	
03254680	BANKLICK CR NR S FT MITCHELL, KY	54.60	390145	0843158	1974	1981				E	
03253000	SF LICKING R AT HAYES, KY	920.00	383930	0842110	1915	1931		E			
03254000	LICKING R AT BUTLER, KY	3385.00	384722	0842105	1938	1942	E		E		C
03254400	N FK GRASSY CR NR PINER, KY	13.60	384731	0843050	1967	1983		E			
03254460	GRASSY CR AT DEMOSSVILLE, KY	119.00	384736	0842548	1950	1972				E	
03254500	LICKING R AT MORNING VIEW, KY	3539.00	384945	0842715	1914	1916		E			
03255000	OHIO R AT CINCINNATI, OH	76580.00	390540	0843038	1936	1976	E	E	E		
03260010	PLEASANT RUN CR AT CRESENT SPRINGS, KY	.68	390318	0843359	1973	1986	E		E		
03277100	GUNPOWDER CR NR UNION, KY	50.20	385638	0844651	1975	1981				E	
03277185	CRAIGS CR TRIB NR WARSAW, KY	.68	384426	0845608	1976	1986					
03277210	OHIO R AT MARKLAND D NR WARSAW, KY	83170.00	384631	0845819	1915	1965					
03277290	BOTTOM FORK NR MAYKING, KY	[3.03	370824	0824531	1976	1987	E		E		
03277300	N FK KENTUCKY R AT WHITESBURG, KY	66.40	370703	0824929	1953	1975		E	E		
03277340	N FK KENTUCKY R AT BLACKEY, KY	131.00	370743	0825827	1965	1965				E	
					1972	1981					
03277360	ROCKHOUSE CR NR FLETCHER, KY	51.60	370910	0825628	1958	1967				E	
03277370	LINE FK AT DEFEATED CR, KY	40.80	370610	0825920	1958	1976				E	
03277400	LEATHERWOOD CR AT DAISY, KY	40.90	370648	0830533	1965	1974*	E	E	E		
03277411	N FK KENTUCKY R AT CORNETTSVILLE, KY	322.00	370743	0830511	1958	1972				E	
03277437	BREEDING CR NR ISOM, KY	0.69	381234	0825542	1977	1985	E		E		
03277630	BRIAR FK NR HAZARD, KY	1.32	371520	0831726	1976	1985	E		E		
03277835	TROUBLESOME CR AT DRAWF, KY	59.90	372030	0830707	1958	1967				E	
03277915	BALLS FK AT ARY, KY	45.40	372235	0830850	1959	1975				E	
03278000	BEAR BR NR NOBLE, KY	2.21	372702	0831143	1955	1973*	E	E	E		
03278500	TROUBLESOME CR AT NOBLE, KY	177.00	372636	0831306	1950	1981		E			
03279000	TROUBLESOME CR NR CLAYHOLE, KY	187.00	372755	0831605	1928	1931		E			
03279400	QUICKSAND CR AT LUNAH, KY	101.00	373331	0831104	1958	1972				E	
03279500	QUICKSAND CR NR JACKSON, KY	153.00	373354	0831330	1928	1931		E			
03280500	N FK KENTUCKY R NR AIRDALE, KY	1294.00	373625	0833750	1928	1942		E			
03280551	MIDDLE FK KENTUCKY R AT ASHER, KY	70.60	370310	0832400	1958	1976				E	
03280570	GREASY CR AT NAPIER, KY	37.70	365919	0831719	1975	1981				E	
03280590	GREASY CR AT HOSKINSTON, KY	95.00	370429	0832310	1958	1967				E	
03280728	BULL CR NR HYDEN, KY	1.84	371030	0832616	1976	1986	E		E		
03280900	MIDDLE FK KENTUCKY R AT BUCKHORN, KY	420.00	372045	0832807	1957	1975*	E	E	E		
03280935	STAMPER FORK AT CANOE, KY	[1.57	372624	0832617	1975	1987	E		E		
03281016	RED BIRD R NR SPRING CR, KY	52.70	370231	0833249	1976	1981				E	
03281030	RED BIRD R AT BIG CR, KY	125.00	370924	0833522	1954	1972			E	E	
03281065	GOOSE CR AT GOOSEROCK, KY	49.60	370450	0834133	1976	1981				E	
03281080	COLLINS FK AT BLUEHOLE, KY	67.40	370613	0834519	1958	1976				E	
03281090	PACES CR NR GARRARD, KY	.47	370817	0834201	1976	1985	E		E		
03281200	S FK KENTUCKY R AT ONEIDA, KY	486.00	371623	0833856	1958	1982	E		E		
03281350	SEXTON CR AT TAFT, KY	71.00	372113	0834135	1959	1964				E	
					1967	1967					
					1975	1977					
					1979	1981					
03282045	STURGEON CR NR HEIDELBERG, KY	96.40	373142	0834736	1942	1972				E	
03282135	S FK STATION CAMP CR NR DRIP ROCK, KY	41.40	373340	0835801	1959	1976				E	
03282170	STATION CAMP CR AT WAGERSVILLE, KY	115.00	373715	0835734	1954	1972				E	
03282190	REDLICK CR NR STATION CAMP, KY	69.50	373340	0835801	1959	1976				E	
03282198	CLEAR CR TRIB NR WEST IRVINE, KY	.59	374219	0840126	1975	1986	E		E		
03283000	STILLWATER CR AT STILLWATER, KY	24.00	374524	0832912	1954	1973*	E	E	E		
03283100	RED R NR PINE RIDGE, KY	142.00	374911	0833429	1969	1976					
03283305	M FK RED RIVER AT ZACHARIAH, KY	.58	374235	0834012	1975	1986	E		E		
03283610	LULBEGRUD CK TRIB AT WESTBEND, KY	.33	375456	0835830	1975	1986					
03283630	LULBEGRUD CR AT LOG LICK, KY	49.30	375138	0840124	1973	1981				E	
03283830	MUDDY CR AT DOYLESVILLE, KY	63.80	375048	0840945	1973	1977				E	
					1979	1981					
03283995	OTTER CR NR FORD, KY	63.50	375215	0851645	1973	1977				E	
03284100	BOONE CR AT GRIMES MILL RD NR LOCUST GROVE	41.80	375503	0842028	1967	1974				E	
03284300	SILVER CR NR KINGSTON, KY	28.60	373751	0841648	1967	1983		E			
03284310	SILVER CR NR BEREA, KY	53.40	373851	0841855	1975	1983	E		E	E	
03284340	OLD TOWN BR TR NR RICHMOND, KY	1.83	374223	0841908	1976	1985	E		E		
03284350	SILVER CR NR RICHMOND, KY	98.50	374236	0842348	1972	1977				E	
					1979	1981					
03284415	PAINT LICK CR AT PAINT LICK, KY	54.40	373753	0842443	1973	1974				E	
03284450	PAINT LICK CR NR MCCREARY, KY	97.60	374229	0842852	1954	1974				E	
03284495	SUGAR CR NR BUCKEYE, KY	41.50	374356	0843326	1975	1977				E	
03284500	KENTUCKY R AT LOCK 8 NR CAMP NELSON, KY	4414.00	374443	0843512	1910	1971	E	E	E		
03284550	W HICKMAN CR AT JONESTOWN, KY	[11.00	375830	0842954	1975	1984		E			
03284600	KENTUCKY R AT CAMP NELSON, KY	4528.00	374610	0843703	1940	1971		E	E		
03284720	DIX R AB COPPER CR NR CRAB ORCHARD, KY	44.40	372639	0842742	1973	1976				E	
03284750	DIX R BL COPPER CR NR CRAB ORCHARD, KY	70.60	372727	0842841	1973	1976				E	
03284800	DIX R NR STANFORD, KY	160.00	373318	0843610	1973	1976				E	
03284935	HANGING FK CR NR STANFORD, KY	46.90	373244	0844342	1973	1974				E	
03284995	HANGING FK CR NR HUBBLE, KY	91.10	373724	0844049	1973	1974				E	

STATION NUMBER	STATION NAME AND LOCATION	DRAINAGE AREA	LATI-TUDE	LONGI-TUDE	SW BEGIN YEAR	SW END YEAR	PEAK STAGE	COM-PLETE STAGE	PEAK FLOW	LOW FLOW	MISC FLOW MEAS
03285100	BALLS BR TRIB NR DANVILLE, KY	.13	373714	0844501	1976	1986	E		E		
03285500	DIX R NR BURGIN, KY	395.00	374510	0844210	1909	1922		E			
03286500	KENTUCKY R AT L7 AT HIGHBRIDGE, KY	5036.00	374945	0844326	1901	1927		E			
03287130	CLEAR CR NR MORTONSVILLE, KY	61.60	375637	0844553	1973	1977				E	
03287160	GILBERT CR TR NR SALVISA, KY	.81	375840	0845207	1975	1978			E		
03287534	SOUTH BENSON CK NR FRANKFORT, KY	4.47	380730	0845832	1976	1986	E		E		
03287550	BENSON CR NR FRANKFORT, KY	107.00	381211	0845256	1943	1972				E	
03288260	CANE RUN NR GEORGETOWN, KY	45.40	381235	0843639	1973	1974				E	
03288450	N ELKHORN CR AT SWITZER, KY	265.00	381512	0844509	1972	1977				E	
03288500	CAVE CR NR FORT SPRING, KY	2.53	380115	0843538	1953	1972*	E	E	E	E	
03289190	WOLF RUN AT CAMBRIDGE DR AT LEXINGTON, KY	15.30	380311	0843304	1976	1988	E		E		
03289410	S ELKHORN CR NR WOODLAKE, KY	156.00	381107	0844416	1972	1981				E	
03290000	FLAT CR NR FRANKFORT, KY	5.63	381753	0845632	1952	1971*	C	E	C		
03290420	SIX MILE NR DEFOE, KY	42.60	382239	0850034	1973	1974				E	
03290490	SIX MILE CK NR LOCKPORT, KY	76.50	382551	0850020	1973	1974				E	
03290580	TOWN CREEK AT NEW CASTLE, KY	5.62	382523	0851017	1976	1986	E		E		
03290675	DRENNON CK AT DRENNON SP, KY	82.50	383047	0850252	1973	1974				E	
03291000	EAGLE CR AT SADIEVILLE, KY	42.90	382322	0843236	1941	1974	E	E	E	E	
03291050	S RAYS FK TRIB NR CORINTH, KY	0.58	382713	0843421	1976	1986	E		E		
03291110	EAGLE CR NR NEW COLUMBUS, KY	124.00	382646	0843948	1972	1974				E	
03291270	EAGLE CR NR HOLBROOK, KY	258.00	383811	0844221	1954	1954				E	
					1957	1957					
					1962	1962					
					1972	1981					
03291490	TEN MILE CR NR FOLSOM, KY	68.40	384253	0844458	1973	1976				E	
03291700	LITTLE KY R NR BEDFORD, KY	73.20	383328	0851634	1950	1972				E	
03292100	CORN CR NR BEDFORD, KY	27.50	383630	0852521	1975	1981				E	
03292200	JEFF BR NR SLIGO, KY	.87	383111	0851105	1976	1986	E		E		
03292467	HARRODS CR NR SKYLIGHT, KY	60.30	382315	0853127	1972	1974				E	
03292472	SOUTH FORK HARRODS CR NR CRESTWOOD, KY	1.97	382043	0852929	1975	1988	E		E		
03295000	SALT R NR HARRODSBURG, KY	41.40	374526	0845223	1953	1973*	E	E	E		
03295290	SALT R AT FOX CR, KY	131.00	375952	0845735	1972	1976					
03295500	SALT R NR VAN BUREN, KY	196.00	375806	0850803	1938	1982		E			
03295580	BEECH CR NR TAYOLORSVILLE, KY	53.20	380108	0851722	1974	1976				E	
03295610	SALT R AT TAYLORSVILLE, KY	359.00	380144	0852038	1937	1975				E	
					1972	1976					
03295705	BULLSKIN CR AT FINCHVILLE, KY		381000	0851800	1974	1975		E		E	
03295800	BRASHEARS CR NR FINCHVILLE, KY	147.00	380820	0851746	1953	1972				E	
03295845	BRADSHAW CK NR SHELBYVILLE, KY	1.36	381055	0851105	1976	1986	E		E		
03295985	SIMPSON CR NR TAYLORSVILLE, KY	57.30	375934	0852320	1974	1976			E		
03296000	PLUM CR SUBWATER SHED NO.4 NR SIMPSONVILLE	1.55	381027	0852205	1955	1964*		E			
03296500	PLUM CR NR WILSONVILLE, KY	19.10	380620	0852614	1954	1961*	E	E	E	E	
03296700	PLUM CR SWS N 15 NR WILSONVILLE, KY	1.03	380544	0852441	1957	1961*		E			
03296800	PLUM CR SWS N 17 NR WATERFORD, KY	.52	380407	0852448	1957	1961*		E			
03297000	LITTLE PLUM CR NR WATERFORD, KY	5.15	380344	0852545	1954	1961*	E	E	E		
03297500	PLUM CR AT WATERFORD, KY	31.80	380305	0852555	1954	1974*	E		E		
03297700	COX CR NR HIGHGROVE, KY	95.80	375824	0853233	1968	1972				E	
03297970	LONG RUN NR EASTWOOD, KY	15.20	381412	0852609	1974	1977*	E	E	E		
03298390	FLOYDS FK NR GAP IN KNOB, KY	259.00	380204	0853933	1972	1976				E	
03298535	ELM LICK CR NR CLERMONT, KY	.68	375530	0853741	1976	1986	E		E		
03298710	N ROLLING FK NR GRAVEL SWITCH, KY	66.20	373319	0850214	1974	1981				E	
03298760	N ROLLING FK AT BRADSFORDVILLE, KY	95.70	373022	0850834	1972	1977				E	
03298865	BIG S FK AT BRADSFORDVILLE, KY	59.60	372918	0850757	1974	1981				E	
03299445	POTTINGER CR NR NEW HOPE, KY	43.50	373835	0853157	1974	1978				E	
					1980	1981					
03300000	BEECH FK NR SPRINGFIELD, KY	85.90	374215	0850845	1953	1972	E	E	E		
03300300	CHAPLIN R AT SHARPSVILLE, KY	140.00	375128	0850401	1954	1972				E	
03300390	CHAPLIN R NR CHAPLIN, KY	262.00	375214	0851351	1972	1977				E	
03300498	CARTWRIGHT CR AT FREDRICKTOWN, KY	82.30	374545	0851929	1972	1977				E	
03300500	BEECH FK AT FREDERICKTOWN, KY	542.00	374535	0852100	1929	1932		E			
03300780	HARDINS CR NR HOLY CROSS, KY	57.80	374241	0852313	1975	1978				E	
					1980	1981					
03300990	TOWN CR TRIB AT BARDSTOWN, KY	.32	374930	0852730	1975	1986					
03301000	BEECH FK AT BARDSTOWN, KY	669.00	374749	0852851	1939	1974	E	E	E		
03301940	NORTHERN DITCH AT OKOLONA, KY	11.10	380901	0854137	1974	1979		E			
03302085	OTTER CR TRIB NR VINE GROVE, KY	.90	374801	0860142	1975	1986					
03302100	OTTER CR AT GRAHAMTON, KY	88.40	375406	0860132	1953	1972				E	
03302150	DOE RUN NR BRANDENBURG STATION, KY	52.70	375728	0860718	1953	1972				E	
03303195	SINKING CR AT ROSETTA, KY	36.00	374747	0861625	1970	1976				E	
03303198	SINKING CR DENTS BR NR IRVINGTON, KY	66.10	374918	0861742	1970	1976				E	
03303200	SINKING CR NR IRVINGTON, KY	86.70	375018	0861926	1953	1972				E	
03303205	SINKING CR NR LODIBURG, KY	125.00	375206	0862316	1971	1977				E	
03303210	SINKING CR AT SAMPLE, KY	222.00	375342	0862905	1953	1970				E	
03303450	BLACKFORD CR NR MACEO, KY	111.00	375356	0865911	1953	1974				E	
03303500	OHIO R AT OWENSBORO, KY	97200.00	374642	0870632	1940	1954*	E	E	E		
03304500	MCGILLS CR NR MCKINNEY, KY	2.14	372638	0844152	1951	1971*	E		E		
03305000	GREEN R NR MCKINNEY, KY	22.40	372519	0844501	1951	1973*	E	E	E		
03305500	GREEN R NR MOUNT SALEM, KY	36.30	372440	0844511	1954	1961*	E	E	E		
03305520	GREEN R AT MIDDLEBURG KY	66.50	372106	0844909	1972	1974				E	
03305559	CARPENTER CR TRIB NR HUSTONVILLE, KY	.88	372621	0845041	1976	1986					
03305660	GREEN R NR DUNNVILLE, KY	221.00	371313	0845912	1972	1977				E	
03305720	S FK NR DUNNVILLE, KY	71.00	371249	0845814	1972	1978				E	
03305725	IRVIN BRANCH NR SALEM, KY	1.37	370423	0845758	1976	1986	E		E		
03305760	GOOSE CR AT DUNNVILLE, KY	51.60	371159	0850016	1972	1977				E	
03305800	GREEN R AT NEATSVILLE, KY	399.00	371130	0850744	1953	1973				E	

DISCONTINUED GAGING-STATION RECORDS

STATION NUMBER	STATION NAME AND LOCATION	DRAINAGE AREA	LATI-TUDE	LONGI-TUDE	SW BEGIN YEAR	SW END YEAR	PEAK STAGE	COM-PLETE STAGE	PEAK FLOW	LOW FLOW	MISC FLOW MEAS
03305865	CASEY CR AT CASEY CR, KY	74.70	371757	0850900	1972	1977				E	
03305945	ROBINSON CR AT ACTON, KY	48.40	372031	0851441	1974	1981				E	
03306500	GREEN R AT GREENSBURG, KY	736.00	371513	0853011	1939	1975*	E	E	E		
03306640	WHITE OAK CR TR NR MONTPELIER, KY	.50	370354	0851148	1976	1986	E		E		
03306690	RUSSELL CR NR JOPPA, KY	62.90	370405	0851446	1974	1981				E	
03306850	RUSSELL CR AT COLUMBIA, KY		370632	0851810	1972	1974				E	
03307100	RUSSELL CR NR GRESHAM, KY	265.00	371005	0852811	1965	1975*	E	E	E	E	
03307215	BIG PITMAN CR NR BENGAL, KY	47.70	372305	0852737	1974	1978				E	
					1980	1981					
03307295	BIG PITMAN CR NR SUMMERSVILLE, KY	126.00	371817	0853139	1953	1972				E	
03307400	BIG BRUSH CR NR SUMMERSVILLE, KY	45.70	372038	0853726	1974	1978				E	
					1980	1981					
03307500	S FK LITTLE BARREN R AT EDMONTON, KY	18.30	365827	0853611	1941	1972*	E	E	E		
03307600	S FK LITTLE BARREN R AT SULPHUR WELL, KY	79.60	370601	0853804	1975	1981				E	
03307670	PRICES CR NR GRADYVILLE, KY	2.53	370142	0853103	1976	1986	E		E		
03307730	E FK LITTLE BARREN R NR SULPHUR WELL, KY	87.40	370605	0853558	1975	1981				E	
03307800	LITTLE BARREN R NR MONROE, KY	244.00	371335	0854039	1960	1976				E	
03308950	ECHO R OUTLET AT MAMMOTH CAVE, KY		371045	0860630	1953	1974				E	
03309000	GREEN R AT MAMMOTH CAVE, KY	1983.00	371043	0860646	1938	1950	E	E	E		
03309100	WET PRONG BUFFALO CR NR MAMMOTH CAVE, KY	2.26	371347	0861024	1962	1974				E	
03309500	MCDOUGAL CR NR HODGENVILLE, KY	5.34	373237	0854019	1953	1971*	E	E	E	E	
03310000	N FK NOLIN R AT HODGENVILLE, KY	36.40	373433	0854425	1941	1973*	E	E	E		
03310078	S FK NOLIN R AT MATHERS MILL, KY	49.60	373235	0854607	1974	1978				E	
03310160	NOLIN R NR GLENDALE, KY	185.00	373503	0855459	1972	1973				E	
03310S70	VALLEY CR NR GLENDALE, KY	90.10	373641	0855550	1973	1981				E	
03310380	BACON CR AT HIGHWAY 31W AT BONNIEVILLE, KY	53.50	372230	0855409	1974	1981				E	
03310500	NOLIN R AT WAX, KY	600.00	372043	0860721	1935	1962*	E	E	E		
03310600	DOG CR NR MAMMOTH CAVE, KY	8.12	371647	0860705	1961	1974				E	
03310880	BRIER CR TRIB NR OLLIE, KY	.31	371741	0861149	1976	1986	E		E		
03311100	BYLEW CR NR MAMMOTH CAVE, KY	5.16	371540	0861307	1961	1974			E	E	
03312000	BEAR CR NR LEITCHFIELD, KY	30.80	372536	0861645	1950	1971*	E	E	E		
03312100	BEAR CR NR ROUNDHILL, KY	137.00	371456	0862140	1953	1972				E	
03312500	BARREN R NR PAGEVILLE, KY	533.00	365109	0860437	1939	1963	E	E	E		
03312795	LITTLE BEAVER CR NR GLASGOW, KY	.89	370036	0860100	1976	1986	E		E		
03313500	W BAYS FK AT SCOTTSVILLE, KY	7.47	364453	0861147	1951	1972	E	E	E		
03313800	LICK CR NR FRANKLIN, KY	21.60	364723	0862924	1959	1983	E		E		
03313900	TRAMMEL CR NR SCOTTSVILLE, KY	93.40	364354	0861623	1953	1972				E	
03314000	DRAKES CR NR ALVATON, KY	478.00	365343	0862250	1940	1971	E	C	E	E	
03315000	BARREN R A L 1 A GREENCASTLE, KY	1968.00	370510	0863010	1923	1937	E	E	E		
03315265	GASPER R NR RICHELIEU, KY		365925	0863753	1972	1977				E	
03315300	GASPER R AT HADLEY, KY	190.00	370312	0863547	1953	1972				E	
03315810	MUDDY CR AT DUNBAR, KY	94.30	371101	0864624	1953	1974				E	
03315885	POINDEXTER BR TRIB NR RUSSELLVILLE, KY	.25	365025	0865104	1976	1986	E		E		
03316000	MUD R NR LEWISBURG, KY	90.50	370015	0865426	1940	1972*	E	E	E		
03316200	WOLFLICK CR NR LEWISBURG, KY	116.00	370108	0865733	1953	1972				E	
03316500	GREEN R NR PARADISE, KY	6182.00	371553	0865843	1940	1981		E			
					1961	1981					
03317000	ROUGH R NR MADRID, KY	225.00	373531	0861946	1936	1959	E	E	E		
03317500	N FK ROUGH T NR WESTVIEW, KY	42.00	374132	0862329	1954	1973*	E	E	E		
03317965	LONG LICK CR TRIB NR AXTEL, KY	.38	373846	0862957	1975	1986	E		E		
03318000	ROUGH R NR FALLS OF ROUGH, KY	454.00	373633	0862947	1940	1956		E			
03318200	ROCK LICK CR NR GLEN DEAN, KY	20.10	373924	0863343	1955	1971*		E		E	
03319520	WEST FORK ADAMS FK NR FORDSVILLE, KY	.26	374113	0864133	1976	1986	E		E		
03321000	POND R NR WHITE PLAINS, KY	343.00	371337	0872057	1927	1940	E	E	E		
03321215	CYPRESS CR NR RUMSEY, KY	149.00	373032	0871900	1972	1976				E	
03321275	EAST FORK DEER CR TRIB NR ONTON, KY	.95	373129	0872831	1976	1986	E		E		
03321350	S FK PANTHER CR NR WHITESVILLE, KY	58.20	373708	0865315	1968	1983		E			
03321370	S FK PANTHER CR NR MASONVILLE, KY	109.00	373843	0870039	1954	1972				E	
03321410	N FK PANTHER CR NR MASONVILLE, KY	88.30	374205	0870354	1954	1972				E	
03321465	RHODES CR TRIB NR OWENSBORO, KY	.29	374711	0871222	1975	1986	E		E		
03321500	GREEN R AT LOCK AND DAM 1 AT SPOTTSVILLE	9181.00	375130	0872435	1928	1931		E			
03322250	OHIO R AT MOUNT VERNON, KY		375543	0875344	1977	1980		E			
03322350	HIGHLAND CR NR WAVERLY, KY	62.30	374122	0874508	1975	1977				E	
03322400	HIGHLAND CR NR UNIONTOWN, KY	166.00	374551	0874957	1953	1977				E	
03382975	WARD CR AT LEWISTOWN, KY	.91	370834	0874825	1975	1986	E		E		
03383500	TRADEWATER R NR DALTON, KY	283.00	371628	0874748	1927	1940	E	E	E		
03383605	W FK DONALDSON CR NR FREDONIA, KY	2.52	371508	0875925	1975	1986	E		E		
03384000	ROSE CR AT NEBO, KY	2.10	372258	0873758	1952	1970*	C	E	C		
03384500	OHIO R AT DAM 51 AT GOLCONDA, IL	143900.00	372128	0882857	1941	1952		C			
03400000	POOR FK A HARLAN LETCHER CO LIN, KY	51.70	370000	0825445	1940	1943		E			
03400585	POOR FK AT ROSSPOINT, KY	142.00	365304	0831719	1972	1977				E	
03400600	WOOD CR NEAR LONDON, KY	3.89	370940	0840643	1953	1971	E		E		
					1972	1987	E		E		
03400700	CLOVER FK AT EVARTS, KY	82.40	365156	0831137	1959	1983	E		E		
03400796	CRANE CR NR SMITH, KY	1.63	364451	0831550	1976	1977		E			
03400985	MARTINS FK AT HARLAN, KY	116.00	364957	0831936	1960	1960					E
03401040	PEARL BR AT WALLINS CR, KY	1.40	365007	0832443	1976	1985	E		E		
03401400	L YELLOW CR AT MIDDLESBORO, KY	10.80	363630	0834213	1959	1966		E	E		
03401500	YELLOW CR BYPASS AT MIDDLESBORO, KY	35.30	363752	0834345	1941	1983*	E		E		
03402020	SHILALAN CR NR PAGE, KY	2.96	363954	0833523	1976	1986	E		E		
03402230	YELLOW CR NR FERNDALE, KY	99.50	364235	0833840	1972	1981				E	
03402480	CLEAR CR AT CLEAR CR SPRINGS, KY	38.50	364340	0834342	1975	1981				E	

DISCONTINUED GAGING-STATION RECORDS

STATION NUMBER	STATION NAME AND LOCATION	DRAINAGE AREA	LATI-TUDE	LONGI-TUDE	SW BEGIN YEAR	SW END YEAR	PEAK STAGE	COM-PLETE STAGE	PEAK FLOW	LOW FLOW	MISC FLOW MEAS
03402500	CUMBERLAND R AT PINEVILLE, KY	676.00	364448	0834134	1928	1931		E			
03402850	LEFT FK STRAIGHT CR AT CARY, KY	33.70	364729	0833957	1958	1976				E	
03402852	STRAIGHT CR AT STRAIGHT CR, KY	89.80	364624	0834012	1953	1967				E	
03403180	STINKING CR AT DEWITT, KY	49.10	365235	0834417	1961	1975				E	
03403255	ROAD E CR AT DEWITT, KY	25.20	365238	0834417	1961	1975				E	
03403530	RICHLAND CR NR BARBOURVILLE, KY	27.70		0835420	1961	1976				E	
03403538	LITTLE RICHLAND CR NR BINKLE, KY	11.60	365549	0834954	1974	1983	E		E		
03403910	CLEAR FK AT SAXTON, KY	331.00	363802	0840642	1968	1983		E			
03404200	JELLICO CR NR WILLIAMSBURG, KY	103.00	364056	0841520	1953	1972				E	
03404390	MARSH CR NR WHITELY CITY, KY	72.00	364438	0842216	1960	1961				E	
					1974	1981					
03404688	LAUREL R NR LILY, KY	52.30	370230	0840254	1974	1981				E	
03404810	LITTLE LAUREL R NR LILY, KY	42.40	370103	0840641	1975	1981				E	
03404867	GOZEY HOLLOW NR CORBIN, KY	.31	365641	0835942	1976	1985	E		E		
03405000	LAUREL R AT CORBIN, KY	201.00	365809	0840738	1910	1973	E	E	E		
03405500	LAUREL R NR VOX, KY	245.00	365705	0841330	1929	1931		E			
03405700	S FK ROCKCASTLE R NR PEOPLES, KY	95.10	371605	0840302	1961	1972				E	
03405818	MIDDLE FK ROCKCASTLE R NR PARROT, KY	79.00	372036	0840446	1975	1981				E	
03405842	HORSE LICK CR NR LAMERO, KY	61.70	371912	0840818	1975	1981				E	
03405854	BIG HURRICANE BR AT CONWAY, KY	1.91	372751	0842008	1976	1985	E		E		
03405868	ROUNDSTONE CR AT HOMMEL, KY	52.90	372318	0841739	1975	1981				E	
03405900	ROUNDSTONE CR AT LIVINGSTON, KY	144.00	371755	0841250	1953	1976					
03406000	WOOD CR NR LONDON, KY	3.89	370940	0840643	1954	1971*	C	E	C	E	
03406330	SKEGG CR NR BILLOWS, KY	55.90	371348	0841637	1975	1981				E	
03407000	ROCKCASTLE R AT ROCKCASTLE SPRINGS, KY	745.00	370035	0841855	1921	1931	E	E	E		
03407100	CANE BR NR PARKERS LAKE, KY	.67	365205	0842657	1956	1987	E	E	E		
03407200	WFK CANE BR NR PARKERS LAKE, KY	0.26	365149	0842708	1956	1986	E		E		
03407300	HELTON BR AT GREENWOOD, KY	.85	365307	0842855	1956	1974	E	E	E		
03407425	BUCK CR NR WOODSTOCK, KY	73.00	371634	0843426	1975	1981				E	
03407640	BUCK CR AT DYKES, KY	253.00	370336	0842535	1972	1981				E	
03410590	ROCK CR NR YAMACRAW, KY	56.90	364210	0843346	1965	1965				E	
					1975	1981					
03410825	LITTLE S FK CUMBERLAND R NR GRIFFIN, KY	56.40	364054	0844338	1975	1981				E	
03410900	LITTLE S FK CUMBERLAND R NR OIL VALLEY, KY	98.20	364530	0844020	1953	1972				E	
03411000	S FK CUMBERLAND R AT NEVELSVILLE, KY	1271.00	365025	0843500	1915	1950	E	E	E		
03411500	CUMBERLAND R AT BURNSIDE, KY	4865.00	365921	0843635	1825	1950	E	E	E		
03411700	LAKE CUMBERLAND AT BURNSIDE, KY	4869.00	365928	0843710	1951	1970					
03412000	PITMAN CR NR SOMERSET, KY	26.30	370805	0843515	1949	1953		E			
03412500	PITMAN CR AT SOMERSET, KY	31.30	370701	0843531	1953	1972*	E	E	E		
03412700	FISHING CR NR HOGUE, KY	59.80	370950	0844232	1968	1977				E	
03413000	CUMBERLAND R NR JAMESTOWN, KY	5331.00	365600	0850000	1937	1940		E			
03413200	BEAVER CR NR MONTICELLO, KY	43.40	364751	0845346	1968	1983		E			
03413202	ELK SPRING CR NEAR SPANN, KY	[.57	365053	0854724	1976	1987	E		E		
03413345	OTTER CR NR SUSIE, KY	67.10	364619	0845848	1953	1966				E	
03413425	WILLIAMS CR TRIB NR CARTWRIGHT, KY	0.76	364458	0850444	1976	1986	E		E		
03414080	CROCUS CR NR BAKERTON, KY	108.00	365232	0852039	1972	1976				E	
03414102	BEAR CR NEAR BURKESVILLE, KY	[352.00	364614	0851630	1976	1987	E		E		
03414175	MARROWBONE CR AT GRIDER, KY	80.70	364815	0852547	1975	1981				E	
03435100	RED R NR ADAIRVILLE, KY	229.00	364204	0865142	1957	1972				E	
03437380	ELBOW CR TRIB NR CANTON, KY	.83	364732	0880023	1975	1986	E		E		
03437390	LICK CREEK NR CANTON, KY	.39	365130	0872541	1977	1986	E		E		
03437500	S FK LITTLE R AT HOPKINSVILLE, KY	46.50	365022	0872852	1950	1973*	E	E	E		
03437610	WHITE CR TR NR HOPKINSVILLE, KY	.19	365407	0872815	1975	1976		E			
03438070	MUDDY R NR DERULEAN, KY	30.50	365840	0874236	1968	1983		E			
03438167	DRY CR NR LAMASCO, KY	34.60	370137	0875548	1968	1972			E	E	
03438170	EDDY CR NR LAMASCO, KY	71.70	370159	0875626	1968	1974				E	
03438191	KENTUCKY-BARKLEY CANAL NR GRAND RS, KY		365939	0881236	1971	1974		E			
03438200	CUMBERLAND R AT EUREKA, KY	17594.00	370037	0881256	1939	1964		E			
03438470	LIVINGSTON CR NR DYCUSBURG, KY	112.00	370835	0880948	1954	1974				E	
03608000	TENNESSEE R AT SHANNON DAM SITE NR MURRAY	39780.00	363228	0880211	1931	1937		E			
03608500	TENNESSEE R AT AURORA LANDING, KY	40010.00	364507	0880658	1930	1932		E			
03609500	TENNESSEE R NR PADUCAH, KY	[40200.00	370111	0881650	1941	1984	E		E		
03610000	CLARKS R AT MURRAY, KY	89.70	363534	0881800	1952	1971*	E	E	E		
03610500	CLARKS R NR BENTON, KY	227.00	365224	0882048	1938	1973*	E	E	E		
03610503	CHESTNUT CR NR BENTON, KY	.82	365438	0882024	1975	1986	E		E		
03610820	CLARKS R TRIB NR REIDLAND, KY	.13	365937	0883113	1975	1986	E		E		
03611000	OHIO R AT PADUCAH, KY	202800.00	370522	0883540	1873	1975		C			
03613000	HUMPHREY CR AT LACENTER, KY	44.20	370439	0885721	1953	1972				E	
07022500	PERRY CR NR MAYFIELD, KY	1.72	364045	0883757	1953	1965*	C	E	C	E	
					1968	1972					
07022600	MAYFIELD CR AT MAYFIELD, KY	95.10	364454	0883706	1954	1972				E	
07023000	MAYFIELD CR AT LOVELACEVILLE, KY	204.00	365709	0884930	1938	1972*	E	E	E		
07023200	MISSISSIPPI R AT COLUMBUS, KY	921900.00	364558	0890648	1843	1958	E		E		
07023500	OBION CR AT PRYORSBURG, KY	36.30	364110	0884335	1951	1973	E	E	E		
07023700	OBION CR NR ARLINGTON, KY	203.00	364530	0890013	1953	1972				E	
07024070	MISSISSIPPI R AT HICKMAN, KY	922500.00	363422	0891156	1926	1958	E		E		

* Period of continuous-record only
C Currently operated.
E Eliminated

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATITUDE	LONGITUDE	COUNTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. ACTIVE STATUS	PHY. ACTIVE STATUS	SED. ACTIVE STATUS	CHEMICAL ACTIVE STATUS
03201400	BRUSHY FORK AT THOMAS, KY	374050	0823519	071		1980	1982		N	N	N
03207845	CARD CREEK AT MOUTHCARD, KY	372254	0821530	195	4.18	1974	1980		N	N	N
03207875	FEDS CR AT FEDS CREEK, KY	372407	0821438	195	11.60	1972	1975		N	N	N
03207905	BIG CREEK AT DUNLAP, KY	372543	0821452	195	9.55	1974	1976		N	N	N
03207915	ELKFOOT BRANCH NEAR NIGH, KY	372352	0821703	195	0.70	1980	1984			N	
03207925	ISLAND CREEK NEAR PHYLLIS, KY	372523	0821817	195	2.42	1974	1980		N	N	N
03207935	LICK CR.AT LICK CREEK, KY	372344	0821808	195	6.70	1972	1976		N	N	N
03207940	MILLERS CREEK NR PHYLLIS, KY	372519	0821953	195	1.68	1973	1981		N	N	N
03207962	DICKS FORK AT PHYLLIS, KY	372657	0822016	195	0.82	1975	1979			N	
						1982	1984			N	
03208000	LEVISA FORK BELOW FISHTRAP DAM, KY	372458	0822515	195	392.00	1965	1979		N	N	N
03209300	RUSSELL FORK AT ELKHORN CITY, KY	371814	0822035	195	554.00	1961	1983		N	N	N
03209402	ELKHORN CREEK NEAR ELKHORN CITY, KY	371635	0822239	195		1980	1982		N	N	N
03209420	MARROWBONE CREEK AT WOLFPIT, KY	372101	0822524	195		1980	1982		N	N	N
03209430	GREASY CREEK NEAR SUTTON, KY	372336	0822806	195		1980	1982		N	N	N
03209438	DORTON CREEK NEAR DORTON, KY	371652	0823347	195		1980	1982		N	N	N
03209453	LONG FORK NEAR VIRGIE, KY	372023	0823521	195		1980	1982		N	N	N
03209457	ROBINSON CREEK AT ROBINSON CREEK, KY	372316	0823312	195		1980	1982		N	N	N
03209460	SHELBY CREEK AT SHELBIANA, KY	372524	0822957	195	112.00	1965	1979		N	N	N
03209530	MUD CREEK NEAR GRETHEL, KY	372742	0823921	071		1980	1982		N	N	N
03209540	TOLLAR CR NR HAROLD, KY	373128	0823851	071		1980	1982		N	N	N
03209545	MUD CREEK AT HAROLD, KY	373213	0823840	071	51.90	1978	1980		N	N	N
03209585	RIGHT FORK BEAVER CREEK AT TOPMOST, KY	372135	0824722	119		1980	1982		N	N	N
03209590	CANEY FORK BEAVER CREEK NEAR RAVEN, KY	372450	0824756	119		1980	1982		N	N	N
03209600	RIGHT F BEAVER C AT WAYLAND, KY	372635	0824828	071	73.90	1978	1980		N		N
03209603	JONES FORK AT BETTY, KY	372701	0825033	119		1980	1982		N	N	N
03209607	SALTLICK CREEK NEAR BOSCO, KY	372940	0825121	071		1980	1982		N	N	N
03209650	LEFT FK BEAVER CR AT DRIFT, KY	372856	0824509	071	58.50	1978	1980		N		N
03209680	LEFT FORK BEAVER CR AT PRINTER, KY	373204	0824438	071		1980	1982		N	N	N
03209700	BEAVER CR AT MARTIN, KY	373410	0824528	071	228.00	1961	1971		N		N
03209800	LEVISA FORK AT PRESTONSBURG, KY	374015	0824638	071	1702.00	1976	1979		N	N	N
03209850	MIDDLE CREEK NEAR PRESTONSBURG, KY	373906	0824954	071		1980	1982		N	N	N
03209870	LEFT FORK MIDDLE CR NR GOODLOE, KY	373647	0825053	071		1980	1982		N	N	N
03209890	MIDDLE CR NR PRESTONBURG, KY	373917	0824749	071	62.10	1978	1980		N	N	N
03209910	ABBOTT CREEK NEAR PRESTONSBURG, KY	374052	0824741	071		1980	1982		N	N	N
03210040	RACCOON CR. NR ZEBULON, KY	373055	0822705	195	14.80	1973	1980		N	N	N
03210060	RACKOON CR NR ZEBULLON, KY	373312	0822719	195		1980	1982		N	N	N
03210160	CANEY FORK NEAR GULNARE, KY	373511	0823223	195	3.74	1973	1980		N	N	N
03210310	BRUSHY FK. AT HEENON, KY	373958	0822903	195	20.40	1973	1976		N	N	N
03210420	BUFFALO CREEK NEAR ENDICOTT, KY	373758	0823618	071	6.21	1973	1980		N	N	N
03210450	BUFFALO CREEK NEAR GERMAN, KY	374004	0823818	071		1980	1982		N	N	N
03211690	DANIELS CREEK NEAR ODDS, KY	374450	0824218	115		1980	1982		N	N	N
03211700	DANIELS CR AT MOUTH NR VAN LEAR, KY	374450	0824322	115	12.00	1978	1980		N		N
03211800	LEVISA FK ABV PAINT CR AT PAINTSVILLE, KY	374850	0824729	115	1975.00	1974	1979		N		N
03211970	PAINT C NR ELNA, KY	375336	0825742	115	79.30	1967	1967		N		N
03211997	PAINT C AB BARNETTS C NR STAFFORDSVILLE, KY	375014	0825214	127		1971	1972		N		N
03212510	GREASY CREEK NEAR OFFUTT, KY	375019	0824258	115		1980	1982		N	N	N
03212520	TOMS CREEK NEAR TUTOR KEY, KY	375042	0824546	115		1980	1982		N	N	N
03212530	GEORGES CREEK NEAR ULYSSES, KY	375656	0824013	127		1980	1982		N	N	N
03212535	RIGHT FORK CREEK NEAR CHARLEY, KY	375745	0824149	127		1980	1982		N	N	N
03213630	RIGHT FORK HURRICANE CR NR STOPOVER, KY	372946	0820522	195	0.82	1980	1984			N	
03213670	LEFT FORK PETER CREEK AT JAMBOREE, KY	372944	0820814	195		1980	1982		N	N	N
03213680	RIGHT FORK PETER CREEK NEAR PHELPS, KY	373017	0820935	195		1980	1982		N	N	N
03213690	BLACKBERRY CREEK AT RANSOM, KY	373406	0821118	195		1980	1982		N	N	N
03213698	POND CREEK NEAR TOLER, KY	373814	0821513	195		1980	1982		N	N	N
03213750	BIG CREEK NEAR HATFIELD, KY	374334	0822106	195		1980	1982		N	N	N
03214300	WOLF CREEK NEAR MCCLURE, KY	374555	0822855	159		1980	1982		N	N	N
03214600	MIDDLE FORK ROCKCASTLE CREEK AT INEZ, KY	375114	0823243	159	33.34	1980	1982		N	N	N
03214650	COLDWATER FORK NEAR INEZ, KY	375017	0823053	159	17.85	1980	1982		N	N	N
03214700	ROCKCASTLE CREEK AT INEZ, KY	375205	0823232	159	63.10	1970	1972	N	N	N	N
03214720	ROCKHOUSE FORK NEAR MILO, KY	375306	0823455	159		1980	1982		N	N	N
03214730	ROCKCASTLE CR AT CLIFFORD, KY	380007	0823112	127	121.00	1965	1975		N		N
03215250	LEFT FORK BLAINE CREEK NEAR MARTHA, KY	375956	0825621	127		1980	1982		N	N	N
03215320	LOWER LAUREL C NR FLATGAP, KY	375703	0825333	115		1967	1967		N		N
03215367	CAINES CREEK NEAR BLAINE, KY	380142	0825145	127		1980	1982		N	N	N
03215370	BLAINE CR AT HWY 32 BR AT BLAINE, KY	380133	0825113	127	73.80	1978	1980		N		N
03215380	HOOD CREEK AT BLAINE, KY	380140	0825028	127		1980	1982		N	N	N
03215420	BRUSHY CREEK NEAR CORDELL, KY	380114	0824826	127		1980	1982		N	N	N
03215430	BLAINE CREEK BL BRUSHY CREEK NR. BLAINE, KY	380312	0824642	127	151.00	1971	1980		N		N
03215440	RICH CREEK NR. ADAMS, KY	380351	0824506	127		1971	1972		N		N
03215470	LITTLE BLAINE CREEK NEAR EVERGREEN, KY	380338	0824117	127		1980	1982		N	N	N
03215480	LITTLE BLAINE CREEK AT EVERGREEN, KY	380355	0824156	127	23.00	1971	1980		N		N
03215490	BLAINE CREEK NR. YATESVILLE, KY	380632	0824204	127	206.00	1971	1972		N		N
03215500	BLAINE CREEK AT YATESVILLE, KY	380840	0824105	127	217.00	1965	1979		Y		N
03215550	CAT FORK CREEK AT FALLSBURG, KY	381103	0824118	127		1980	1982		N	N	N
03215700	BIG SANDY R AT CATLETTSBURG, KY	382414	0823544	019	4281.00	1955	1975		N		N
03216180	LITTLE SANDY RIVER AT SANDY HOOK, KY	380514	0830728	063		1980	1982		N	N	N
03216230	BIG CANEY CREEK NEAR STARK, KY	380922	0830946	063		1980	1982		N	N	N
03216350	LITTLE SANDY R BL GRAYSON DAM NR LEON, KY	381518	0825925	043	196.00	1966	1979		N		N

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATITUDE	LONGITUDE	COUNTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. ACTIVE STATUS	PHY. ACTIVE STATUS	SED. ACTIVE STATUS	CHEMICAL ACTIVE STATUS
03216370	BIG SINKING CREEK NEAR ADEN, KY	381603	0830227	043		1980	1982		N	N	N
03216400	LITTLE SANDY RIVER AT LEON, KY	381711	0825839	043	255.00	1978	1980		N		
03216430	LITTLE SANDY RIVER AT DOBBINS, KY	380922	0825549	063		1980	1982		N	N	N
03216450	DRY FORK AT WILLARD, KY	381230	0825338	043		1980	1982		N	N	N
03216480	LITTLE F LITTLE SANDY R NR GRAYSON, KY	381815	0825623	043	132.00	1973	1975		N		N
03216520	BERET CREEK NEAR GRAYSON, KY	382038	0825709	043		1980	1982		N	N	N
03216540	EAST FORK LITTLE SANDY RVR NR FALLSBURG, KY	381401	0824232	127	12.20	1978	1983		N		
03216558	EF LITTLE SANDY RIVER NEAR CANNONSBURG, KY	382313	0824314	019		1980	1982		N	N	N
03216567	WILLIAMS CREEK AT PRINCESS, KY	382304	0824450	019		1980	1982		N	N	N
03216570	E F LITTLE SANDY R NR ARGILLITE, KY	382844	0824546	089	138.00	1970	1972		N		N
03216600	OHIO RIVER AT GREENUP DAM, KY	383848	0825138	089	62000.00	1974	1986	N	N	N	N
03216770	SOLDIER FORK AT LAWTON, KY	381556	0831306	043		1971	1972		N		N
03216930	TYGARTS C. AT IRON HILL, KY	382424	0830222	043		1971	1972		N		N
03216960	BUFFALO CREEK NEAR GESLING, KY	382530	0830520	043		1980	1982		N	N	N
03237230	KINNICONICK CR NR RUGLESS, KY	382901	0831655	135	109.00	1970	1972		N		N
03238680	OHIO RIVER AT MELDAHL DAM NR CHILO, OHIO	384750	0841000	025	70800.00	1967	1970		N		N
03238800	OHIO RVR AT RAW WATER INTAKE, CINCINATTI	390411	0842557	061		1970	1970				N
03248165	LICKING RIVER NEAR FREDVILLE, KY	373600	0825736	153		1980	1982		N	N	N
03248380	BURNING FORK AT SAYLERSVILLE, KY	374428	0830322	153		1980	1982		N	N	N
03248520	LEFT FORK NEAR HENDRICKS, KY	374250	0830657	153		1980	1982		N	N	N
03248530	RIGHT FORK AT FRITZ, KY	374219	0830853	153		1980	1982		N	N	N
03248560	JOHNSON CREEK AT KERNIE, KY	374524	0831010	153		1980	1982		N	N	N
03248580	LICK CREEK NEAR BLOOMINGTON, KY	374855	0830750	153		1980	1982		N	N	N
03248610	WHITE OAK CREEK AT WHITE OAK, KY	375132	0831213	175		1980	1982		N	N	N
03248670	WILLIAMS CREEK NEAR ELAMTON, KY	375608	0830910	175		1980	1982		N	N	N
03248685	ELK FORK NEAR LENOX, KY	375652	0831257	175	59.40	1980	1982		N	N	N
03248710	CANEY CREEK NEAR CANEY, KY	374914	0831521	175		1980	1982		N	N	N
03248750	GRASSY CREEK AT GRASSY CREEK, KY	375201	0832045	175		1980	1982		N	N	N
03249500	LICKING R AT FARMERS, KY	380655	0833236	011	827.00	1948	1979		N	N	N
03250000	TRIPLETT CREEK AT MOREHEAD, KY	381104	0832548	205	47.50	1978	1980		N		
03250240	SLATE C NR OWINGSVILLE, KY	380829	0834343	011	185.00	1970	1971		N		N
03250320	ROCK LICK CREEK NR. SHARKEY, KY	381506	0833504	069	4.01	1978	1983		N		
03250400	LICKING RIVER AT SHERBURNE, KY	381646	0834815	069		1981	1983	N	N	N	N
03251400	N F LICKING R NR MILFORD, KY	383500	0840920	023	286.00	1970	1972		N		N
03251500	LICKING RIVER AT MCKINNEYSBURG, KY	383552	0841600	191	2326.00	1951	1979		N	N	N
03251665	STONER CR NR MIDDLETOWN, KY	380651	0840817	017	51.60	1974	1974		N		N
03252190	HINKSTON CR NR SHARPSBURG, KY	381003	0835832	173	78.90	1973	1973		N		N
03252300	HINKSTON CR NR CARLISLE, KY	381433	0840309	017	154.00	1970	1974		N		N
03252500	SOUTH FK LICKING RIVER AT CYNTHIANA, KY	382327	0841811	097	621.00	1949	1983	N	N	N	N
03253500	LICKING RIVER AT CATAWBA, KY	384237	0841839	191	3300.00	1962	1979		N		N
03277200	OHIO RIVER AT MARKLAND DAM, KY	384629	0845752	077	83170.00	1960	1970	N	N	N	N
						1974	1986	N	N	N	N
03277205	OHIO RIVER AT L. & DAM 39 NEAR FLORENCE, KY	384641	0845802	077	82910.00	1953	1975		N		
03277260	YONTS CREEK NEAR NEON, KY	371053	0824302	133		1980	1982		N	N	N
03277300	NORTH FORK KENTUCKY R AT WHITESBURG, KY	370703	0824929	133	66.40	1970	1975		N		N
03277320	KINGS CREEK NEAR ROXANA, KY	370529	0825518	133		1980	1982		N	N	N
03277340	N F KENTUCKY R AT BLACKEY, KY	370743	0825827	133	131.00	1971	1975		N		N
03277361	ROCKHOUSE CREEK NEAR FLETCHER, KY	370836	0825743	133		1980	1982		N	N	N
03277362	ROCKHOUSE CREEK AT LETCHER, KY	370832	0825759	133		1971	1971		N		N
03277370	LINE FORK AT DEFEATED CREEK, KY	370610	0825920	133	40.80	1980	1982		N	N	N
03277380	LINE FORK AT ULVAH, KY	370704	0830228	133		1971	1971		N		N
03277411	N FK KENTUCKY R AT CORNETTSVILLE, KY	370743	0830511	193	322.00	1970	1972		N		N
03277415	RIGHT FORK MACYS CREEK NEAR FARLAR, KY	371004	0831037	193		1980	1982		N	N	N
03277455	YELLOW C AT SASSAFRAS, KY	371315	0830319	119		1965	1975		N		N
03277480	CARR FORK NEAR HAZARD, KY	371234	0830727	193		1971	1971		N		N
03277515	LOTTS CREEK NEAR DARFORK, KY	371701	0831115	193		1980	1982		N	N	N
03277580	BIG CREEK NEAR AVAWAN, KY	371409	0831533	193		1980	1982		N	N	N
03277700	GRAPEVINE CREEK NEAR LAMONT, KY	372111	0831914	193		1980	1982		N	N	N
03277800	TROUBLESOME CREEK NEAR ARY, KY	372201	0830905	193		1980	1982		N	N	N
03277900	BALLS FORK NEAR TALCUM, KY	372208	0830643	119		1980	1982		N	N	N
03278100	BUCKHORN CREEK NEAR NOBLE, KY	372655	0831144	025		1980	1982		N	N	N
03279150	LOST CREEK NEAR LOST CREEK, KY	372756	0831914	025		1980	1982		N	N	N
03279250	LAUREL FORK NEAR ELMROCK, KY	372704	0830123	119		1980	1982		N	N	N
03279300	MIDDLE FORK QUICKSAND CREEK NEAR DECOY, KY	372957	0830529	119		1980	1982		N	N	N
03279370	HAWLS FORK NEAR TIPTOP, KY	373417	0830548	025		1980	1982		N	N	N
03279400	QUICKSAND CR AT LUNAH, KY	373331	0831104	025	101.00	1970	1972		N		N
03279430	CANEY CREEK NEAR CAMP LEWIS, KY	373507	0831128	025		1980	1982		N	N	N
03279460	HUNTING CREEK NEAR ROUSSEAU, KY	373533	0831341	025		1980	1982		N	N	N
03279650	SOUTH FORK QUICKSAND CREEK AT PORTSMOUTH, KY	373157	0831948	025		1980	1982		N	N	N
03279700	QUICKSAND CR AT QUICKSAND, KY	373211	0832055	025	203.00	1965	1975		N		N
03280100	CANE CREEK NEAR JACKSON, KY	373304	0832457	025		1980	1982		N	N	N
03280360	ROCKHOUSE CREEK NEAR HYDEN, KY	370918	0832307	131		1980	1982		N	N	N
03280400	FROZEN CREEK NEAR TAULBEE, KY	373830	0831911	025		1980	1982		N	N	N
03280450	BOONE FORK NEAR VANCLEAVE, KY	373734	0832453	025		1980	1982		N	N	N
03280520	MIDDLE FORK KENTUCKY RIVER NR WARBRANCH, KY	365819	0832656	131		1980	1982		N	N	N
03280530	M F KENTUCKY RIVER AT ASHER, KY	370240	0832429	131		1971	1971		N		N
03280540	BEECH FORK NEAR HELTON, KY	365727	0832348	131		1980	1982		N	N	N
03280550	BEECH FK AT ASHER, KY	370238	0832408	131	33.90	1971	1971		N		N
03280560	GREASY CREEK NEAR NAPIER, KY	365832	0831706	131		1980	1982		N	N	N
03280575	LAUREL FORK NEAR LEWIS CREEK, KY	365843	0831935	131		1980	1982		N	N	N

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATI- TUDE	LONGI- TUDE	COU NTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. AC- TIVE STA- TUS	PHY. AC- TIVE STA- TUS	SED. AC- TIVE STA- TUS	CHEM ICAL AC- TIVE STA- TUS
03280590	GREASY CR AT HOSKINSTON, KY	370429	0832310	131	95.00	1971	1971		N		N
03280670	CUTSHIN CREEK NEAR CINDA, KY	370657	0831642	131		1980	1982		N	N	N
03280750	HELL FOR CERTAIN CREEK NEAR KALIOPI, KY	371351	0832430	131		1980	1982		N	N	N
03280950	TURKEY CREEK NEAR TURKEY, KY	372857	0833004	025		1980	1982		N	N	N
03281030	RED BIRD RIVER AT BIG CREEK, KY	370924	0833522	051	125.00	1970	1972		N		N
03281035	BIG CREEK NEAR BIG CREEK, KY	370942	0833416	051		1980	1982		N	N	N
03281045	HECTOR BRANCH NEAR ERILINE, KY	371118	0833639	051		1980	1982		N	N	N
03281065	GOOSE CR NR GOOSEROCK, KY	370450	0834133	051	49.60	1979	1982		N	N	N
03281075	COLLINS FORK NEAR BLUEHOLE, KY	370503	0834605	051		1980	1982		N	N	N
03281097	HORSE CREEK NEAR HIMA, KY	370713	0834646	051		1980	1982		N	N	N
03281133	LITTLE GOOSE CREEK NEAR MANCHESTER, KY	370909	0834713	051		1980	1982		N	N	N
03281175	BULLSKIN CREEK NEAR BRUTUS, KY	371437	0833506	051		1980	1982		N	N	N
03281200	SOUTH FORK KENTUCKY RIVER AT ONEIDA, KY	371623	0833850	051	486.00	1970	1972		N		N
03281340	SEXTON CREEK NEAR CHESTNUTBURG, KY	371724	0834743	051		1980	1982		N	N	N
03281360	LOWER ALLEN CREEK NEAR CONKLING, KY	372238	0834138	189		1980	1982		N	N	N
03282170	STATION CAMP C AT WAGERSVILLE, KY	373715	0835734	065	115.00	1970	1972		N		N
03282300	KENTUCKY RIVER NEAR TRAPP, KY	375107	0840448	065		1982	1983		N	N	N
03282400	RED RIVER AT DAYSBORO, KY	374729	0832240	237		1980	1982		N	N	N
03283100	RED RIVER NEAR PINE RIDGE, KY	374911	0833429	237	142.00	1968	1976		N		N
03284090	BAUGHMAN FORK AT GENTRY ROAD NR ATHENS, KY	375703	0842023	067	7.18	1967	1968		N		N
03284100	BOONE C AT GRIMES MILL RD NR LOCUST GROVE KY	375503	0842028	067	41.80	1967	1968		N		N
03284105	KENTUCKY R NR LEXINGTON, KY	375407	0842236	067		1970	1970				N
03284300	SILVER CREEK NEAR KINGSTON, KY	373751	0841648	151	28.60	1978	1983		N		
03284350	SILVER CR NR RICHMOND, KY	374236	0842348	151		1973	1975		N		N
03284450	PAINT LICK CR NR MCCREARY, KY	374229	0842852	079	97.60	1970	1972		N		N
03284500	KENTUCKY R AT LOCK 8 NR CAMP NELSON, KY	374443	0843512	113	4414.00	1948	1975		N		N
03284800	DIX R NR STANFORD, KY	373318	0843610	137	160.00	1973	1975		N		N
03284935	HANGING F CR NR STANFORD, KY	373244	0844342	137	46.90	1974	1974		N		N
03286200	DIX R AT DIX DAM NR BURGIN, KY	374735	0844222	167	439.00	1961	1979		N		N
03287530	BENSON CR. AT FRANKFORT, KY	381225	0845736	073	71.20	1973	1973		N		N
03287550	BENSON CR NR FRANKFORT, KY	381211	0845256	073	107.00	1970	1972		N		N
03287600	N ELKHORN C AT BRYAN STATION RD AT MONTROSE	380435	0842448	067	21.50	1967	1968		N		N
03287620	N ELKHORN C UNNAMED TR AT MUIR STA RD NR MUI	380521	0842141	067	15.80	1967	1968		N		N
03287700	N ELKHORN C AT HUFFMAN MILL RD NR MATTOXTOWN	380910	0842628	067	62.70	1967	1968		N		N
03287800	GOOSE CREEK AT MT. HOREB RD NR NEWTOWN, KY	381136	0842648	209	14.20	1967	1968		N		N
03287810	GOOSE C AT NEWTOWN RD, NR NEW ZION, KY	381136	0842902	209		1967	1967		N		N
03288200	CANE RUN AT BEREA ROAD NEAR DONERAIL, KY	380819	0843102	067	19.90	1967	1968		N		N
03288260	CANE RUN NR. GEORGETOWN, KY	381235	0843639	209	45.40	1973	1973		N		N
03288500	CAVE CREEK NEAR FORT SPRING, KY	380115	0843538	067	2.53	1968	1968		N		N
03289100	STEELES RUN AT OLD FRANKFORT RD. AT FAYWOOD	380613	0843740	067	6.67	1967	1968		N		N
03289200	TOWN BRANCH AT YARNALLTON RD. AT YARNALLTON	380613	0843517	067		1967	1968		N		N
03290420	SIX MILE NR DEFOE, KY	382239	0850034	103	42.60	1973	1973		N		N
03290490	SIX MILE CK NR LOCKPORT, KY	382551	0850020	103	76.50	1973	1974		N		N
03290675	DRENNON CK AT DRENNON SP, KY	383047	0850252	103	82.50	1973	1974		N		N
03291270	EAGLE CREEK NR HOLBROOK, KY	383811	0844221	081	258.00	1973	1975		N		N
03291490	TEN MILE CR. NR. FOLSOM, KY	384253	0844458	081	68.40	1973	1973		N		N
03291500	EAGLE CR. AT GLENCOE, KY	384218	0844926	187	437.00	1948	1979		N	N	N
03291700	LITTLE KY R NR BEDFORD, KY	383328	0851634	223	73.20	1970	1972		N		N
03292467	HARRODS CR NR SKYLIGHT, KY	382315	0853127	185	60.30	1974	1975		N		N
03292494	OHIO R AT WATER SUPPLY INTAKE AT LOUISVILLE	381652	0854208	111		1970	1970				N
03924500	OHIO RIVER AT LOUISVILLE, KY	381649	0854757	111	91170.00	1968	1983		N	N	N
03294600	OHIO RIVER AT KOSMOSDALE, KY	380205	0855451	111	91200.00	1970	1970				N
03295000	SALT RIVER NR. HARRODSBURG, KY	374526	0845223	167	41.40	1970	1972		N		N
03295500	SALT RIVER NEAR VAN BUREN, KY	375806	0850803	005	196.00	1970	1979		N		N
03295610	SALT RIVER AT TAYLORSVILLE, KY	380144	0852038	215	359.00	1970	1972		N		N
03295800	BRASHEARS CR NR FINCHVILLE, KY	380820	0851746	211	147.00	1970	1972		N		N
03295900	BRASHEARS CR AT TAYLORSVILLE, KY	380149	0852105	215	262.00	1973	1975		N		N
03296000	PLUM CRK SUBWATER SHED NO 4 NR SIMPSONVILLE	381027	0852205	211	1.55	1953	1964			N	
03297500	PLUM CREEK AT WATERFORD, KY	380305	0852555	215	31.80	1953	1961		N	N	N
03297700	COX CR NR HIGHGROVE, KY	375824	0853233	029	95.80	1970	1972		N		N
03297845	FLOYDS FORK NEAR CRESTWOOD, KY	381755	0852536	211	46.70	1979	1983	N	N	N	N
03298390	FLOYDS FORK NR GAP IN KNOB, KY	380204	0853933	029	259.00	1973	1975		N		N
03298760	NORTH ROLLING FORK AT BRADSFORDVILLE, KY	373022	0850834	155	95.70	1973	1975		N		N
03299000	ROLLING FORK NEAR LEBANON, KY	372950	0851926	155	239.00	1970	1980		N		N
03300000	BEECH FORK NEAR SPRINGFIELD, KY	374215	0850845	229	85.90	1970	1972		N		N
03300300	CHAPLIN R AT SHARPSVILLE, KY	375128	0850401	229	140.00	1970	1972		N		N
03300400	BEECH FORK AT MAUD, KY	374958	0851746	179	436.00	1979	1983	N	N	N	N
03300498	CARTWRIGHT CR AT FREDRICKTOWN, KY	374545	0851929	229	82.30	1973	1975		N		N
03301000	BEECH FORK AT BARDSTOWN, KY	374749	0852851	179	669.00	1962	1972		N		N
03301500	ROLLING FORK NR BOSTON, KY	374602	0854214	179	1299.00	1948	1979		N		N
03302060	SALT R AT MOUTH NR LOUISVILLE, KY	380004	0855632	111		1970	1970				N
03302080	OTTER CREEK NR. VINE GROVE, KY	374722	0855919	093		1970	1971		N		N
03302100	OTTER CR AT GRAHAMTON, KY	375406	0860132	163	88.40	1970	1972		N		N
03302150	DOE RUN NR BRANDENBURG STATION, KY	375728	0860718	163	52.70	1970	1972		N		N
03303205	SINKING CREEK NR. LODIBURG, KY	375206	0862316	027	125.00	1971	1971		N		N
03303210	SINKING CREEK AT SAMPLE, KY	375342	0862905	027	222.00	1970	1970		N		N
03303220	BEECH FORK NR CLOVERPORT, KY	374549	0863348	027		1980	1982		N	N	N
03303230	TAR FORK NEAR CLOVERPORT, KY	374627	0863756	027		1980	1982		N	N	N

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATI-TUDE	LONGI-TUDE	COUNTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. ACTIVE STATUS	PHY. ACTIVE STATUS	SED. ACTIVE STATUS	CHEMICAL ACTIVE STATUS
03303280	OHIO RIVER AT CANNELTON DAM, KY	375358	0864220	091	97000.00	1975	1986	N	N	N	N
03303447	BLACKFORD CREEK NEAR MACEO, KY	375219	0865401	059		1980	1982		N	N	N
03303450	BLACKFORD CR NR MACEO, KY	375356	0865911	091	111.00	1973	1975		N		N
03303490	PUP CREEK NEAR MACEO, KY	375030	0865845	059		1980	1982		N	N	N
03303500	OHIO RIVER AT OWENSBORO, KY	374642	0870632	059	97200.00	1970	1970				N
03305000	GREEN RIVER NEAR MCKINNEY, KY	372519	0844501	137	22.40	1970	1972		N		N
03305660	GREEN RIVER NR. DUNNVILLE, KY	371313	0845912	045	221.00	1973	1975		N		N
03305800	GREEN RIVER AT NEATSVILLE, KY	371130	0850744	001	399.00	1959	1972		N	N	N
03305865	CASEY CR AT CASEY CR, KY	371757	0850900	001	74.70	1973	1975		N		N
03306500	GREEN RIVER AT GREENSBURG, KY	371513	0853011	087	736.00	1948	1959		N		
03307300	BIG PITMAN C NR GREENSBURG, KY	371623	0853314	087		1966	1966		N		N
03307800	LITTLE BARREN RIVER NEAR MONROE, KY	371335	0854039	087	244.00	1960	1972		N		N
03308950	ECHO R. OUTLET AT MAMMOTH CAVE, KY	371045	0860630	061		1974	1974		N		N
03309000	GREEN RIVER AT MAMMOTH CAVE, KY	371043	0860646	061	1983.00	1958	1974		N		N
03309100	WET PRONG BUFFALO CREEK NR MAMMOTH CAVE, KY	371347	0861024	061	2.26	1962	1974		N	N	N
03309600	MCDOUGAL CREEK AT HODGENVILLE, KY	373429	0854338	123		1970	1970		N		N
03310000	NORTH FORK NOLIN RIVER AT HODGENVILLE, KY	373433	0854425	123	36.40	1970	1972		N		N
03310030	NORTH FORK NOLIN RIVER NEAR EAGLE MILLS, KY	373332	0854718	123		1970	1979		N		N
03310100	NOLIN R. AT EAGLE MILLS, KY	373355	0855011	123		1970	1972		N		N
03310117	MIDDLE CR. AB. NEELY BR, KY	373850	0854535	093		1971	1971		N		N
03310120	MIDDLE CREEK NEAR TONIEVILLE, KY	373726	0854800	093		1970	1972		N		N
03310130	MIDDLE CREEK AT EAGLE MILLS, KY	373422	0854926	093		1971	1972		N		N
03310160	NOLIN R NR GLENDALE, KY	373503	0855459	093	185.00	1971	1975		N		N
03310210	VALLEY CREEK AT ELIZABETHTOWN, KY	374049	0855234	093		1970	1973		N		N
03310225	VALLEY CREEK AT GAITHERS, KY	373940	0855409	093		1971	1973		N		N
03310250	W. RHUDES CREEK NR. CECILIA, KY	373756	0855532	093		1970	1972		N		N
03310270	VALLEY CR NR GLENDALE, KY	373641	0855550	093	90.10	1960	1975		N		N
03310273	NOLIN RIVER NEAR STAR MILLS, KY	373553	0855715	093		1971	1972		N		N
03310500	NOLIN RIVER AT WAX, KY	372043	0860721	085	600.00	1949	1961		N	N	N
03310550	ROCK CREEK NEAR CLARKSON, KY	372602	0860928	085		1980	1982		N	N	N
03310600	DOG CREEK NEAR MAMMOTH CAVE, KY	371647	0860705	061	8.12	1961	1974		N		N
03311100	BYLEW CREEK NEAR MAMMOTH CAVE, KY	371540	0861307	061	5.16	1965	1974		N		N
03311500	GREEN RIVER AT LOCK 6, AT BROWNSVILLE, KY	371225	0861540	061	2762.00	1978	1982		N		
03311600	BEAVERDAM CR. AT RHODA, KY	370918	0861335	061	10.90	1965	1979		N		N
03312040	BEAR CREEK NEAR BEE SPRING, KY	371725	0861935	061		1980	1982		N	N	N
03312070	SUNFISH CREEK NEAR BEE SPRING, KY	371723	0862236	061		1980	1982		N	N	N
03312100	BEAR CR NR ROUNDHILL, KY	371456	0862140	061	137.00	1960	1972		N		N
03312120	BIG REEDY CR NR ROUNDHILL, KY	371418	0862623	031		1980	1982		N	N	N
03312130	LITTLE REEDY CR NR ROUNDHILL, KY	371445	0862918	031		1980	1982		N	N	N
03312400	BARREN R AT ACKERSVILLE, KY	364028	0855714	171	298.00	1970	1972		N		N
03312680	SKAGGS CR NR GLASGOW, KY	365500	0855504	009	141.00	1970	1972		N		N
03313570	BAYS FORK AT CLAYPOOL,KY	365415	0861406	227	80.90	1960	1968		N		N
03313590	UNNAMED NON-CONTRIB. STREAM AT GREENHILL, KY	365347	0861828	227		1968	1968		N		N
03313900	TRAMMEL CR NR SCOTTSVILLE, KY	364354	0861623	003	93.40	1970	1972		N		N
03314000	DRAKES CREEK NR. ALVATON, KY	365343	0862250	227	478.00	1968	1972		N	N	N
03314595	UNNAMED NON-CONTRIB STREAM AT THREE SPRINGS	365501	0862615	227		1968	1968		N		N
03314610	JENNINGS CREEK NEAR LOST RIVER, KY	365816	0862910	227		1968	1968		N		N
03314650	JENNINGS C AT US 231 AT BOWLING GREEN, KY	365922	0862933	227		1968	1968		N		N
03314680	JENNINGS C BL LOST R OUTLET AT BOWLING GREEN	365944	0862855	227		1968	1968		N		N
03314700	JENNINGS C AT BARREN R RD NR BOWLING GREEN	370034	0862818	227		1968	1968		N		N
03315300	GASPER R AT HADLEY, KY	370312	0863547	227	190.00	1960	1972		N		N
03315510	WELCH CREEK NEAR ABERDEEN, KY	371542	0863544	031		1980	1982		N	N	N
03315590	INDIAN CAMP CREEK NEAR MORGANTOWN, KY	371811	0864139	031		1980	1982		N	N	N
03315600	EAST PRONG INDIAN CAMP CREEK NEAR MORGANTOWN	371725	0864023	031		1980	1982		N	N	N
03315810	MUDDY CR AT DUNBAR, KY	371101	0864624	031	94.30	1960	1982		N	N	N
03315830	PANTHER CREEK NEAR ROCHESTER, KY	371319	0865124	031		1980	1982		N	N	N
03316000	MUD RIVER NEAR LEWISBURG, KY	370015	0865426	141	90.50	1960	1972		N		N
03316200	WOLFLICK CR NR LEWISBURG, KY	370108	0865733	141	116.00	1970	1972		N		N
03316300	ROCKY CREEK NEAR PENROD, KY	370757	0865838	177		1980	1982		N	N	N
03316500	GREEN RIVER AT PARADISE, KY	371553	0865843	177	6183.00	1978	1982		N		
03316640	POND CR NR MARTWICK, KY	371801	0870016	177	125.00	1972	1982		N	N	N
03316660	LEWIS CREEK AT ROCKPORT, KY	372051	0865902	183		1980	1982		N	N	N
03316885	MEETING CR NR BIG CLIFTY, KY	373434	0861259	085		1980	1982		N	N	N
03317500	NORTH FORK ROUGH RIVER NEAR WESTVIEW, KY	374132	0862329	027	42.00	1970	1972		N		N
03318010	ROUGH R AT ROUGH R DAM NR FALLS OF ROUGH, KY	373719	0863015	085	454.00	1962	1983		N		
03318300	ROCK LICK CREEK NEAR FALLS OF ROUGH, KY	373750	0863332	027		1980	1982		N	N	N
03318600	SHORT CREEK NEAR FALLS OF ROUGH, KY	373128	0863128	085		1980	1982		N	N	N
03318700	SOUTH FORK CANEY CREEK AT CANEYVILLE, KY	372526	0862858	085		1980	1982		N	N	N
03319510	ADAMS FORK NEAR FORDSVILLE, KY	373742	0864148	183		1980	1982		N	N	N
03319530	WEST FORK ADAMS FORK NEAR FORDSVILLE, KY	373744	0864339	183		1980	1982		N	N	N
03319570	HALLS CREEK NEAR DUNDEE, KY	373158	0864921	183		1980	1982		N	N	N
03319600	ROUGH RIVER AT HARTFORD, KY	372710	0865438	183		1966	1972		N		N
03319615	MUDDY CREEK NEAR BEAVER DAM, KY	372513	0865055	183		1980	1982		N	N	N
03319620	THREELICK CREEK NEAR BEAVER DAM, KY	372502	0865103	183		1980	1982		N	N	N
03319700	BARNETT CREEK NEAR HARTFORD, KY	373212	0865834	183		1980	1982		N	N	N
03319750	NORTH FORK BARNETT CREEK NEAR HARTFORD, KY	373223	0870039	183		1980	1982		N	N	N
03319885	GREEN RIVER AT LIVERMORE, KY	372908	0870811	149	7512.00	1948	1975		N		
03319925	BUCK CREEK NEAR LIVERMORE, KY	373031	0870827	149		1980	1982		N	N	N
03320075	LONG FALLS CREEK NEAR RUMSEY, KY	373253	0871639	149		1980	1982		N	N	N

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATITUDE	LONGITUDE	COUNTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. ACTIVE STATUS	PHY. ACTIVE STATUS	SED. ACTIVE STATUS	CHEMICAL ACTIVE STATUS
03320400	LONG CREEK NEAR KIRKMANSVILLE, KY	370616	0871334	177		1980	1982		N	N	N
03320700	WEST FORK POND RIVER NEAR APEX, KY	370740	0872217	047		1980	1982		N	N	N
03320740	MCFARLAN CR NR WHITE PLAINS, KY	370725	0872332	047		1980	1982		N	N	N
03321035	DRAKES CREEK NEAR WHITE PLAINS, KY	371157	0872453	107	52.50	1979	1982		N	N	N
03321050	FLAT CREEK NEAR MADISONVILLE, KY	371511	0872650	107		1980	1982		N	N	N
03321100	POND RIVER NEAR SACRAMENTO, KY	372341	0871819	107	523.00	1959	1973		N		N
03321120	POND RIVER NEAR VANDETTA, KY	372630	0872110	149		1980	1982		N	N	N
03321150	OTTER CREEK NEAR HANSON, KY	372913	0872248	107		1980	1982		N	N	N
03321160	CYPRESS CREEK NEAR MIDLAND, KY	371730	0871240	177		1980	1982		N	N	N
03321170	CYPRESS CREEK NEAR CENTRAL CITY, KY	371810	0871150	177		1980	1982		N	N	N
03321180	LITTLE CYPRESS CREEK AT CENTRAL CITY, KY	371743	0870828	177		1980	1982		N	N	N
03321215	CYPRESS CR NR RUMSEY, KY	373032	0871900	149	149.00	1973	1975		N		N
03321230	GREEN RIVER NR BEECH GROVE, KY	373521	0872416	119	8545.00	1975	1986	N	N	N	N
03321290	DEER CR NR SEBREE, KY	373421	0873109	233	122.00	1974	1975		N		N
03321400	NORTH FORK PANTHER CR NR MASONVILLE, KY	374219	0870303	059		1980	1982		N	N	N
03321410	N. FK. PANTHER CREEK NR. MASONVILLE, KY	374205	0870354	059	88.30	1970	1971		N		N
03321450	PANTHER CR NR CURDSVILLE, KY	374331	0871649	059	344.00	1973	1980		N		N
03321455	LICK CREEK NEAR BLUFF CITY, KY	374809	0872634	101		1980	1982		N	N	N
03321455	KNOBLICK CREEK NEAR CURDSVILLE, KY	374243	0872000	059		1980	1982		N	N	N
03321500	GREEN RIVER AT LOCK AND DAM 1 AT SPOTTSVILLE	375130	0872435	101	9181.00	1955	1962		N		N
03322180	CANOE CREEK NEAR HENDERSON, KY	374711	0873530	101	56.00	1979	1982		N	N	N
03322370	CASEY CREEK NEAR WAVERLY, KY	374007	0874707	225		1980	1982		N	N	N
03322400	HIGHLAND CR NR UNIONTOWN, KY	374551	0874957	225	166.00	1970	1972		N		N
03322420	OHIO RIVER NEAR UNIONTOWN DAM, KY	374800	0875900	225		1975	1975		N		N
03382570	EAGLE CREEK NEAR MORGANFIELD, KY	373916	0875800	225		1980	1982		N	N	N
03382600	TRADEWATER R AT POOLS MILL BR NR DAWSON SPRI	370430	0873446	047	60.40	1966	1982		N	N	N
03382650	CASTLEBERRY CREEK NEAR DAWSON SPRINGS, KY	370522	0873512	107		1980	1982		N	N	N
03382680	TRADEWATER R AT COLLINS BRDG, NR DAWSON SPRI	370700	0873720	047		1965	1967		N		N
03382685	TRADEWATER R AT MURPHY F NR DAWSON SP, KY	370849	0873900	107	94.10	1966	1975		N		N
03382700	BUFFALO CK AT ST HWY 1338 NR DAWSON SPG, KY	370829	0873654	107		1965	1969		N		
03382720	BUFFALO C NR DAWSON SPRINGS, KY	370829	0873654	107	12.70	1965	1967		N		N
03382835	COPPERAS C AT HIGHWAY BRIDGE NR ILSLEY, KY	371208	0873726	107		1966	1967		N		N
03382855	CANY C AT MOUTH NR DAWSON SPRINGS, KY	370949	0873947	107		1965	1967		N		N
03382870	TRADEWATER R AT ST HWY 109 AT DAWSON SPRINGS	370903	0874029	107	143.00	1966	1967		N		N
03382890	PINY C BL LK BESHEAR D NR DAWSON SPRINGS, KY	370853	0874055	033		1966	1967		N		N
03383000	TRADEWATER RIVER AT OLNEY, KY	371326	0874653	033	255.00	1949	1983	N	N	N	N
03383500	TRADEWATER R NR DALTON, KY	371628	0874748	033	283.00	1965	1966		N		N
03383650	DONALDSON CREEK NEAR FRYER, KY	371535	0875420	033		1980	1982		N	N	N
03383700	DONALDSON C AT BR ON HWY 293 NR DALTON, KY	371703	0874837	033		1966	1966		N		N
03383710	TRADEWATER R AT ST HWY 293 NR DALTON, KY	371900	0874840	033		1965	1966		N		N
03383755	CLEAR C AT HWY 70 BR NR RICHLAND, KY	371746	0873418	107	17.00	1966	1982		N	N	N
03383770	RICHLAND C ABOVE TRIBUTARY NO. 1 NR ILSLEY	371334	0873553	107		1966	1967		N		N
03383775	UNNAMED TRIB. NO. 1 TO RICHLAND C NR ILSLEY	371331	0873553	107		1966	1967		N		N
03383780	UNNAMED TRIB. NO. 2 TO RICHLAND C NR ILSLEY	371339	0873529	107		1966	1967		N		N
03383800	RICHLAND CK AT RICHLAND, KY	371626	0873615	107		1966	1966		N		
03383901	UNNAMED TRIB TO CLEAR C NR BEULAH, KY	371649	0874111	107		1966	1966		N		N
03384035	LICK CREEK NEAR RABBIT RIDGE, KY	371815	0874358	107		1980	1982		N	N	N
03384050	CLEAR C AT BRIDGE ON ST HWY 293 NR PROVIDENC	372033	0874800	107	197.00	1966	1967		N		N
03384060	TRADEWATER R AT DAM NR PROVIDENCE, KY	372242	0874805	055		1965	1966		N		N
03384072	TRADEWATER R AT BRIDGE BL DAM NR PROVIDENCE	372251	0874801	055		1966	1967		N		N
03384100	TRADEWATER R NR PROVIDENCE, KY	372348	0875042	055	605.00	1965	1972		N		N
03384103	TRADEWATER RIVER NEAR BLACKFORD, KY	372356	0875417	055		1980	1980		N	N	N
03384106	PINEY CREEK NEAR SHADY GROVE, KY	372131	0875528	055		1980	1982		N	N	N
03384133	UNNAMED TRIB TO SLOVER C NR PROVIDENCE, KY	372617	0874705	233		1968	1968				N
03384136	SLOVER CREEK NR CLAY, KY	372652	0874709	233		1969	1969		N		N
03384138	UNNAMED TRIB TO SLOVER C NR CLAY, KY	372628	0874646	233		1969	1969		N		N
03384140	UNNAMED TRIB TO SLOVER C NR CLAY, KY	372652	0874710	233		1969	1979		N		N
03384145	FREDRICKS DITCH NR CLAY, KY	372721	0874711	233		1969	1969		N		N
03384150	CRABORCHARD CK NR CLAY, KY	372744	0874646	233		1965	1982		N	N	N
03384151	CRABORCHARD CREEK NR CLAY, KY	372717	0874823	233		1969	1969		N		N
03384152	CRABORCHARD C AT CLAY, KY	372738	0874915	233		1966	1966		N		N
03384154	CRABORCHARD CR AT CLAY, KY	372737	0874922	233	86.60	1969	1972		N	N	N
03384158	CANEY FORK NEAR CLAY, KY	373127	0874929	233		1980	1982		N	N	N
03384180	TRADEWATER RIVER NEAR SULLIVAN, KY	372846	0875713	055	861.19	1975	1977		N	N	N
03384200	SMITH DITCH NEAR STURGIS, KY	373254	0875525	225		1980	1982		N	N	N
03400480	LOONEY CREEK NEAR CLUTTS, KY	365817	0825806	095		1980	1982		N	N	N
03400650	CLOVER FORK NEAR SHIELDS, KY	365348	0830825	095		1980	1982		N	N	N
03400700	CLOVER FORK AT EVARTS, KY	365156	0831137	095	82.40	1960	1972		N		N
03400785	MARTINS FK ABOVE SMITH, KY	364334	0831717	095	23.80	1986	1988			N	
03400796	CRANE CREEK NR SMITH, KY	364451	0831550	095	1.63	1978	1980		N		
03401290	BROWNICE CREEK NEAR OAKS, KY	364318	0833332	013		1980	1982		N	N	N
03402400	CLEAR CREEK NEAR PINEVILLE, KY	364342	0834428	013		1980	1982		N	N	N
03402450	LITTLE CLEAR CREEK NEAR PINEVILLE, KY	364317	0834327	013		1980	1982		N	N	N
03402800	STRAIGHT CREEK NEAR KETTLE ISLAND, KY	364706	0833609	013		1980	1982		N	N	N
03402830	LEFT FORK STRAIGHT CREEK NEAR CARY, KY	364754	0833936	013		1980	1982		N	N	N
03403100	MIDDLE FORK STINKING CREEK NEAR WALKER, KY	365314	0834225	121		1980	1982		N	N	N

DISCONTINUED WATER-QUALITY RECORDS

STATION NUMBER	STATION NAME AND LOCATION	LATI- TUDE	LONGI- TUDE	COU NTY	DRAINAGE AREA	QW BEGIN YEAR	QW END YEAR	BIO. AC- TIVE STA- TUS	PHY. AC- TIVE STA- TUS	SED. AC- TIVE STA- TUS	CHEM ICAL AC- TIVE STA- TUS
03403150	ROAD FORK CREEK NEAR BARNYARD, KY	365402	0834441	121		1980	1982		N	N	N
03403550	LITTLE INDIAN CREEK NEAR PERMON, KY	364940	0835821	121		1980	1982		N	N	N
03403590	FOURMILE BRANCH NEAR BRYANTS STORE, KY	364648	0835605	121		1980	1982		N	N	N
03404100	WATTS CREEK NEAR WOFFORD, KY	364708	0840807	235		1980	1982		N	N	N
03404200	JELLICO C NR WILLIAMSBURG, KY	364056	0841520	235	103.00	1979	1982		N	N	N
03404350	MARSH CREEK NEAR DUCKRUN, KY	364255	0842118	147		1980	1982		N	N	N
03404650	TRIBUTARY TO LAUREL RIVER NEAR LESBAS, KY	370334	0835956	125		1980	1982		N	N	N
03404800	TRIBUTARY TO LAUREL RIVER NR PINE GROVE, KY	370347	0840447	125		1980	1982		N	N	N
03404820	LAUREL R AT MUNICIPAL DAM NEAR CORBIN, KY	365813	0840711	125	140.00	1977	1983		N		
03404900	LYNN CAMP CREEK AT CORBIN, KY	365705	0840537	235	53.80	1973	1983		N		
03405000	LAUREL R AT CORBIN, KY	365809	0840738	235	201.00	1949	1973		N		N
03405550	CRAIG CR NR HIGHTOP, KY	370108	0841049	125		1980	1982		N	N	N
03405600	SOUTH FORK TO ROCKCASTLE RIVER NEAR CRAWFORD	371217	0835642	125		1980	1982		N	N	N
03405700	S.F.ROCKCASTLE RIVER NR. PEOPLES, KY	371605	0840302	109	95.10	1961	1972		N		N
03405730	POND CREEK NEAR PEOPLES, KY	371708	0840313	109		1980	1982		N	N	N
03405780	LAUREL FORK NEAR MCKEE, KY	372247	0835921	109		1980	1982		N	N	N
03405800	INDIAN CREEK NEAR HURLEY, KY	372445	0840215	109		1980	1982		N	N	N
03405900	ROUNDSTONE CR AT LIVINGSTON, KY	371755	0841250	203	144.00	1960	1972		N		N
03406000	WOOD CREEK NEAR LONDON, KY	370940	0840643	125	3.89	1976	1980	N	N		
03407100	CANE BRANCH NEAR PARKERS LAKE, KY	365205	0842657	147	.67	1955	1974		N	N	N
03407200	WEST FORK CANE BR NEAR PARKERS LAKE, KY	365149	0842708	147	.26	1957	1973		N	Y	N
03407300	HELTON BRANCH AT GREENWOOD, KY	365307	0842855	147	.85	1955	1973		N	N	N
03407640	BUCK CREEK AT DYKES, KY	370336	0842535	199	253.00	1973	1975		N		N
03410530	ROARING PAUNCH CREEK NEAR BARTHELL, KY	364009	0842939	147		1980	1982		N	N	N
03410560	ROCK CREEK AT WHITE OAK JUNCTION, KY	364210	0843544	147		1980	1982		N	N	N
03410600	SOUTH FK CUMBERLAND R NR YAMACRAW, KY	364332	0843238	147	1083.00	1948	1976		N		
03410700	WOLF CREEK AT WOLF CREEK, KY	364356	0843334	147		1980	1982		N	N	N
03410900	LITTLE S F CUMBERLAND R NR OIL VALLEY, KY	364530	0844020	147	98.20	1970	1972		N		N
03411000	SOUTH FORK CUMBERLAND RIVER AT NEVELSVILLE	365025	0843500	147	1271.00	1960	1975		N		
03411100	SINKING CREEK NEAR GREGORY, KY	365021	0844125	231		1980	1982		N	N	N
03411250	PUCKETT CREEK NEAR PATHFORK, KY	364519	0832745	095		1980	1982		N	N	N
03412500	PITMAN CREEK AT SOMERSET, KY	370701	0843531	199	31.30	1970	1972		N		N
03412700	FISHING CREEK NR HOGUE, KY	370950	0844232	199	59.80	1970	1972		N		N
03414000	CUMBERLAND RIVER NEAR ROWENA, KY	365302	0850822	207	5790.00	1965	1979		N		N
03414080	CROCUS CR NR BAKERTON, KY	365232	0852039	057	108.00	1973	1975		N		N
03414110	CUMBERLAND RIVER NEAR BURKESVILLE, KY	364446	0852221	057	6050.00	1948	1979		N		N
03435100	RED R NR ADAIRVILLE, KY	364204	0865142	181	229.00	1970	1972		N		N
03435140	WHIPPOORWILL CREEK NR. CLAYMOUR, KY	365229	0870520	219	20.80	1978	1982		N		
03435265	WHIPPOORWILLCR AT DOT, KY	364017	0865756	141	115.00	1973	1975		N		N
03435380	ELK F NR HADENSVILLE, KY	363908	0870517	219	88.50	1973	1975		N		N
03436190	W F RED R NR SAINT ELMO, KY	363905	0872239	047	162.00	1973	1975		N		N
03437500	SOUTH FORK LITTLE RIVER AT HOPKINSVILLE, KY	365022	0872852	047	46.50	1949	1975		N		
03438000	LITTLE R NR CADIZ, KY	364640	0874318	221	244.00	1958	1973		N	N	N
03438070	MUDDY FORK LITTLE RIVER NEAR CERULEAN, KY	365840	0874236	221	30.50	1978	1982		N		
03438170	EDDY CR NR LAMASCO, KY	370159	0875626	033	71.70	1970	1974		N		N
03438190	BARKLEY-KENTUCKY CANAL NEAR GRAND RIVERS, KY	365923	0881317	143		1978	1982		N		
03438220	CUMBERLAND RIVER NR GRAND RIVERS, KY	370118	0881316	143	17598.00	1969	1986	N	N	N	N
03438470	LIVINGSTON CR NR DYCUSBURG, KY	370835	0880948	055	112.00	1970	1972		N		N
03609500	TENNESSEE R NR PADUCAH, KY	370111	0881650	157	40200.00	1951	1973		N		N
03609750	TENNESSEE R AT HWY 60, NR PADUCAH, KY	370216	0883146	145	40330.00	1950	1950		N		
						1952	1952		N		
						1967	1972		N		
						1974	1986	N	N	N	N
03610000	CLARKS RIVER AT MURRAY, KY	363534	0881800	035	89.10	1970	1972		N		N
03610200	CLARKS RIVER AT ALMO, KY	364130	0881625	035	134.00	1982	1983	N	N	N	N
03610500	CLARKS RIVER NEAR BENTON, KY	365224	0882048	157	227.00	1948	1961		N		N
03610545	WEST FORK CLARKS RIVER NEAR BREWERS, KY	364648	0882803	157	68.70	1970	1981		N	N	N
03610585	W F CLARKS R AT KALER, KY	365303	0883311	083	150.00	1973	1975		N		N
03613000	HUMPHREY CR AT LACENTER, KY	370439	0885721	007	44.20	1970	1972		N		N
07023000	MAYFIELD CREEK AT LOVELACEVILLE, KY	365709	0884930	039	212.00	1960	1972		N		N
07024000	BAYOU DE CHIEN NEAR CLINTON, KY	363743	0885750	105	68.7	1954	1983	N	N	N	N
07023700	OBION CR NR ARLINGTON, KY	364530	0890013	105	203.00	1970	1972		N		N
07024070	MISSISSIPPI RIVER AT HICKMAN, KY	363422	0891156	075	922500.00	1969	1970	N	N		N

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October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	$2.54\text{x}10^{1}$	millimeters (mm)
	$2.54\text{x}10^{-2}$	meters (m)
feet (ft)	$3.048\text{x}10^{-1}$	meters (m)
miles (mi)	$1.609\text{x}10^{0}$	kilometers (km)
	Area	
acres	$4.047\text{x}10^{3}$	square meters (m^2)
	$4.047\text{x}10^{-1}$	square hectometers (hm^2)
	$4.047\text{x}10^{-3}$	square kilometers (km^2)
square miles (mi^2)	$2.590\text{x}10^{0}$	square kilometers (km^2)
	Volume	
gallons (gal)	$3.785\text{x}10^{0}$	liters (L)
	$3.785\text{x}10^{0}$	cubic decimeters (dm^3)
	$3.785\text{x}10^{-3}$	cubic meters (m^3)
million gallons	$3.785\text{x}10^{3}$	cubic meters (m^3)
	$3.785\text{x}10^{-3}$	cubic hectometers (hm^3)
cubic feet (ft^3)	$2.832\text{x}10^{1}$	cubic decimeters (dm^3)
	$2.832\text{x}10^{-2}$	cubic meters (m^3)
cfs-days	$2.447\text{x}10^{3}$	cubic meters (m^3)
	$2.447\text{x}10^{-3}$	cubic hectometers (hm^3)
acre-feet (acre-ft)	$1.233\text{x}10^{3}$	cubic meters (m^3)
	$1.233\text{x}10^{-3}$	cubic hectometers (hm^3)
	$1.233\text{x}10^{-6}$	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	$2.832\text{x}10^{1}$	liters per second (L/s)
	$2.832\text{x}10^{1}$	cubic decimeters per second (dm^3/s)
	$2.832\text{x}10^{-2}$	cubic meters per second (m^3/s)
gallons per minute (gal/min)	$6.309\text{x}10^{-2}$	liters per second (L/s)
	$6.309\text{x}10^{-2}$	cubic decimeters per second (dm^3/s)
	$6.309\text{x}10^{-5}$	cubic meters per second (m^3/s)
million gallons per day	$4.381\text{x}10^{1}$	cubic decimeters per second (dm^3/s)
	$4.381\text{x}10^{-2}$	cubic meters per second (m^3/s)
	Mass	
tons (short)	$9.072\text{x}10^{-1}$	megagrams (Mg) or metric tons

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